DOCUMENT RESUME

ED 143 188 EC 102 208

AUTHOR	Davila, Robert R., Ed.; Tweedie, David R., Ed.
TITLE	Report of the Proceedings of the Forty-Seventh Meeting of the Convention of American Instructors of the Deaf.
INSTITUTION	Congress of the U.S., Washington, D.C. Senate.
PUB DATE	75
NOTE	681p.; Convention Theme (Our Learning Society-Issues and Trends in the Education of the Deaf, Greensboro, North Carolina, June 22-27, 1975) ; Not available in hard copy due to marginal legibility of the original document
AVAILABLE FROM	Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402
EDRS PRICE	MF-$1.33 Plus Postage. HC Not Available from EDRS.
DESCRIPTORS	*Aurally Handicapped; Career Education; *Conference Reports; *Delivery Systems; Educational Facilities; Educational Responsibility; Exceptional Child Education; Federal Legislation; Parent Participation; *Program Descriptions; Research Reviews (Publications); Sign Language; Special Education; Special Schools; Student Placement; Teacher Education; *Teaching Methods; *Trend Analysis

ABSTRACT

Presented are the proceedings of the Convention of American Instructors of the Deaf, 1975, representing a history of the organization and a documentation of developments and changes in the education of deaf persons since the founding of the organization in 1850. Papers are provided on the following topics (sample titles in parentheses): The Learners: Where They Are and How They Got There ("Assessment of Emotional and Social Functioning of Young Hearing Impaired Students" and "The Government as Change Agent: The Federal Perspective"), The Learners: Their Needs ("What Is Career Education?" and "Underachievement"), The Learner's Teacher Learns ("The Use of Observation Techniques with Deaf Students" and "Strategies for Staff Development"), and The Learners: Participating in a Learning Society ("The Evolving Role of Gallaudet College" and "Community Education and the Classroom Teacher"). Included in the document are the organization constitution and bylaws, a listing of organization members, and committee reports. (IM)

Documents acquired by ERIC include many informal unpublished materials not available from other sources. ERIC makes every effort to obtain the best copy available. Nevertheless, items of marginal reproducibility are often encountered and this affects the quality of the microfiche and hardcopy reproductions ERIC makes available via the ERIC Document Reproduction Service (EDRS). EDRS is not responsible for the quality of the original document. Reproductions supplied by EDRS are the best that can be made from the original.

ED143188

94th Congress
2d Session

SENATE

Document
No. 94–172

U S DEPARTMENT OF HEALTH,
EDUCATION & WELFARE
NATIONAL INSTITUTE OF
EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

REPORT

OF THE

PROCEEDINGS OF THE FORTY-SEVENTH MEETING OF THE CONVENTION OF AMERICAN INSTRUCTORS OF THE DEAF

Greensboro, North Carolina

CONVENTION THEME

Our Learning Society—Issues and Trends in the Education of the Deaf

JUNE 22–27, 1975

Ordered to be printed with illustrations

U.S. GOVERNMENT PRINTING OFFICE
72-029 O
WASHINGTON : 1976

EC 102 208

S. Con. Res. 84 Agreed to April 9, 1976

Ninety-fourth Congress of the United States of America

AT THE SECOND SESSION

Begun and held at the City of Washington on Monday, the nineteenth day of January, one thousand nine hundred and seventy-six

Concurrent Resolution

Resolved by the Senate (the House of Representatives concurring), That the report of the proceedings of the forty-seventh biennial meeting of the Convention of American Instructors of the Deaf, held in Greensboro, North Carolina, from June 22, 1975, through June 27, 1975, be printed with illustrations as a Senate document. Four thousand additional copies of such document shall be printed for the use of the Joint Committee on Printing.

Attest:

Secretary of the Senate.

Attest:

Clerk of the House of Representatives.

(II)

LETTER OF TRANSMITTAL

GALLAUDET COLLEGE,
OFFICE OF THE PRESIDENT,
Washington, D.C., January 16, 1976.

Hon. NELSON A. ROCKEFELLER,
President of the Senate.
Hon. CARL ALBERT,
Speaker of the House.

TO THE CONGRESS OF THE UNITED STATES: In accordance with the act of incorporation of the Convention of American Instructors of the Deaf, approved January 26, 1897, I have the honor to submit the proceedings of the 47th meeting of the Convention, held at the Royal Villa Hotel, Greensboro, North Carolina, June 22–27, 1975, inclusive.

I have the honor to be

Very respectfully, your obedient servant,

EDWARD C. MERRILL, JR.,
President.

LETTER OF SUBMITTAL

THE CONVENTION OF
AMERICAN INSTRUCTORS OF THE DEAF,
Washington, D.C., November 25, 1975.

DR. EDWARD C. MERRILL, JR.,
President, Gallaudet College,
Washington, D.C.

DEAR SIR: In accordance with Section 4 of the Act of Incorporation of the Convention of American Instructors of the Deaf, approved January 26, 1897, a report is to be made to Congress, through the President of Gallaudet College at Washington, D.C., of "such portions of its proceedings and transactions as its officers shall deem to be of general public interest and value concerning the education of the deaf."

In agreement with the above request. I have the honor to submit herewith a comprehensive report containing such papers and addresses as may be of special interest or of historic value, all of which were presented at the 47th meeting, held at the Royal Villa Hotel, Greensboro, North Carolina, June 22–27, 1975, inclusive.

May I respectfully request that this report be laid before Congress.

Very truly,

GERALD BURSTEIN,
Secretary-Treasurer.

FOREWORD

The published proceedings of the Convention of American Instructors of the Deaf, Inc., represent not only a complete history of the organization from its founding in 1850, but also document developments and changes in the education of deaf persons during this period. This present report of the proceedings of the 47th biennial meeting of the Convention held in Greensboro, North Carolina, June 22–27, 1975, adds still more valued information of great benefit to educators of the deaf everywhere.

The editors wish to express their appreciation specifically to Sr. Francis Solano, Ph. D., Dr. Edgar Lowell, Dr. Barbara Beggs, Dr. Larry Stewart and Mr. Carl Kirchner for the invaluable assistance in developing, coordinating and monitoring the Convention program. Special recognition is also due to Dr. Howard Quigley who, as always, stood ready to assume numerous responsibilities over and above the call of duty, and to Mr. John Coder, Senate Rules Committee, for his personal interest and support in the preparation of the materials for publication. And also to Mrs. Frances Parrotta. Mrs. Gerri Frank, and Mrs. Connie Young of the Kendall Demonstration Elementary School staff who assumed numerous responsibilities. Many other people, too numerous to mention, also assisted. To them we extend our sincere appreciation.

Robert R. Davila, Ph. D.,
Editor and Program Chairman.
David R. Tweedie, Ed. D.,
Associate Editor.

ACT OF INCORPORATION

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That Edward M. Gallaudet, of Washington, in the District of Columbia; Francis D. Clarke, of Flint, in the State of Michigan; S. Tefft Walker, of Jacksonville, in the State of Illinois; James L. Smith of Faribault, in the State of Minnesota; Sarah Fuller, of Boston, in the State of Massachusetts; David C. Dudley, of Colorado Springs, in the State of Colorado; and John R. Dobyns, of Jackson, in the State of Mississippi, officers and members of the Convention of American Instructors of the Deaf, and their associates and successors, be, and they are hereby, incorporated and made a body politic and corporate in the District of Columbia, by the name of the "Convention of American Instructors of the Deaf," for the promotion of the education of the deaf on the broadest, most advanced, and practical lines, and by the name it may sue, plead, and be impleaded, in any court of law, or equity, and may use and have a common seal and change the same at pleasure.

SEC. 2. That the said corporation shall have the power to take and hold personal estate and such real estate as shall be necessary and proper for the promotion of the educational and benevolent purposes of said corporation, which shall not be divided among the members of the corporation, but shall descend to their successors for the promotion of the objects aforesaid.

SEC. 3. That said corporation shall have a constitution and regulations or bylaws and shall have the power to amend the same at pleasure: *Provided,* That such constitution and regulations or bylaws do not conflict with the laws of the United States or of any State.

SEC. 4. That said association may hold its meetings in such places as said incorporators shall determine and shall report to Congress, through the President of the Columbia Institution for the Deaf and Dumb[*] at Washington, District of Columbia, such portions of its proceedings and transactions as its officers shall deem to be of general public interest and value concerning the education of the deaf.

Approved, January 26, 1897.

[*] Now named Gallaudet College.

MEETINGS OF THE CONVENTION OF AMERICAN INSTRUCTORS OF THE DEAF

First—New York, N.Y., August 2[illegible]–30, 1850.
Second—Hartford, Conn., August 27–29, 1851.
Third—Columbus, Ohio, August 10–12, 1853.
Fourth—Staunton, Va., August 13–15, 1856.
Fifth—Jacksonville, Ill., August 10–12, 1858.
Sixth—Washington, D.C., May 12–16, 1868.
Seventh—Indianapolis, Ind., August 24–26, 1870.
Eighth—Belleville, Ontario, July 15–20, 1874.
Ninth—Columbus, Ohio, August 17–22, 1878.
Tenth—Jacksonville, Ill., August 26–30, 1882.
Eleventh—Berkeley, Calif., July 15–23, 1886.
Twelfth—New York, N.Y., August 23–27, 1890.
Thirteenth—Chicago, Ill., July 17, 19, 21, 24, 1893.
Fourteenth—Flint, Mich., July 2–8, 1895.
Fifteenth—Columbus, Ohio, July 28–August 2, 1898.
Sixteenth—Buffalo, N.Y., July 2–8, 1901.
Seventeenth—Morganton, N.C., July 8–13, 1905.
Eighteenth—Ogden, Utah, July 4–10, 1908.
Nineteenth—Delavan, Wis., July 6–13, 1911.
Twentieth—Staunton, Va., June 25–July 3, 1914.
Twenty-first—Hartford, Conn., June 20–July 3, 1917.
Twenty-second—Mount Airy, Pa., June 28–July 3, 1920.
Twenty-third—Belleville, Ontario, June 25–30, 1923.
Twenty-fourth—Council Bluffs, Iowa, June 29–July 4, 1925.
Twenty-fifth—Columbus, Ohio, June 27–July 1, 1927.
Twenty-sixth—Faribault, Minn., June 17–21, 1929.
Twenty-seventh—Winnipeg, Manitoba, June 22–26, 1931.
Twenty-eighth—West Trenton, N.J., June 18–23, 1933.
Twenty-ninth—Jacksonville, Ill., June 17–21, 1935.
Thirtieth—New York, N.Y., June 20–25, 1937.
Thirty-first—Berkeley, Calif., June 18–23, 1939.
Thirty-second—Fulton, Mo., June 23–27, 1941.
Thirty-third—St. Augustine, Fla., June 16–20, 1947.
Thirty-fourth—Jacksonville, Ill., June 19–24, 1949.
Thirty-fifth—Fulton, Mo., June 17–22, 1951.
Thirty-sixth—Vancouver, Wash., June 28–July 3, 1953.
Thirty-seventh—West Hartford, Conn., June 26–July 1, 1955.
Thirty-eighth—Knoxville, Tenn., June 23–28, 1957.
Thirty-ninth—Colorado Springs, Colo., June 28–July 3, 1959.
Fortieth—Salem, Oreg., June 25–30, 1961.
Forty-first—Washington, D.C., June 22–28, 1963.
Forty-second—Flint, Mich., June 21–25, 1965.
Forty-third—West Hartford, Conn., June 25–30, 1967.
Forty-fourth—Berkeley, Calif., June 21–27, 1969.
Forty-fifth—Little Rock, Ark., June 25–July 2, 1971.
Forty-sixth—Indianapolis, Ind., June 24–29, 1973.
Forty-seventh—Greensboro, N.C., June 22–27, 1975.

PRESIDENTS

1. Christopher Morgan, New York.
2. Thomas Day, Connecticut.
3. John W. Andrews, Ohio.
4. James H. Skinner, Virginia.
5. Rev. J. M. Sturtevant, Illinois.
6. Harvey P. Peet, New York.
7. Rev. Collins Stone, Connecticut.
8. W. W. Turner, Connecticut.
9. Rev. Dr. A. L. Chapin, Wisconsin.
10. Edward Miner Gallaudet, District of Columbia.
11. Philip G. Gillett, Illinois.
12. Warring Wilkinson, California.
13. Philip G. Gillett, Illinois.
14. Wesley O. Connor, Georgia.
15–20. Edward Miner Gallaudet, District of Columbia.
21–23. Percival Hall, District of Columbia.
24. Newton F. Walker, South Carolina.
25. John W. Jones, Ohio.
26. Frank M. Driggs, Utah.
27. Elbert A. Gruver, Pennsylvania.
28. Thomas S. McAloney, Colorado.
29. Alvin E. Pope, New Jersey.
30. Harris Taylor, New York.
31. Ignatius Bjorlee, Maryland.
32. Elwood A. Stevenson, California.
33. Clarence J. Settles, Florida.
34. Leonard M. Elstad, District of Columbia.
35. Mrs. H. T. Poore (Ethel A.), Tennessee.
36. Daniel T. Cloud, New York.
37. Truman L. Ingle, Missouri.
38. James H. Galloway, New York.
39. Edward R. Abernathy, Ohio.
40. Richard G. Brill, California.
41. Roy M. Stelle, New York.
42. Lloyd A. Ambrosen, Maryland.
43. Stanley D. Roth, Kansas.
44. Marvin B. Clatterbuck, Oregon.
45. Kenneth R. Mangan, Illinois.
46. Armin G. Turechek, Colorado.
47. Jack W. Brady, West Virginia.

OFFICERS OF THE CONVENTION OF AMERICAN INSTRUCTORS OF THE DEAF 1973–75- AND THE STANDING EXECUTIVE COMMITTEE

President	Robert Davila, District of Columbia
President-Elect	Joseph Youngs, Jr., Maine
First Vice President	Les Rudy, California
Second Vice President	Henry Bjorlie, New York
Secretary-Treasurer	Gerald Burstein, California

DIRECTORS

(The directors, with the officers, and the immediate past president, form the standing executive committee)

Rosemary Hilke	Washington
First Vice President	Alfred J. Lamb, Indiana
Frank Slater	Florida
Jack Brady	West Virginia
Kenneth Clark	Kansas
Ronald Nomeland	District of Columbia

OFFICERS OF THE CONVENTION OF AMERICAN INSTRUCTORS OF THE DEAF 1973–75, AND THE STANDING EXECUTIVE COMMITTEE

President	Jack W. Brady, West Virginia
President-Elect	Robert R. Davila, District of Columbia
First Vice President	Alfred J. Lamb, Indiana
Second Vice President	Winfield McChord, Jr., Kentucky
Secretary-Treasurer	Gerald Burstein, California

DIRECTORS

(The directors, with the officers, and the immediate past president, form the standing executive committee)

Martha M. Lutz	Missouri
William J. McConnell	Virginia
Armin G. Turechek	Colorado
Rosemary Hilke	Washington
Gary Olsen	Indiana
Frank Slater	Florida

REPORT OF THE
PROCEEDINGS OF THE 47TH BIENNIAL MEETING

CONVENTION OF
AMERICAN INSTRUCTORS OF THE DEAF

"Our Learning Society — Issues and Trends in Education of the Deaf"

HOSTED BY

THE DEPARTMENT OF HUMAN RESOURCES

and

THE NORTH CAROLINA SCHOOLS FOR THE DEAF

June 22–27, 1975

Greensboro, North Carolina

EDITOR

Robert R. Davila, Ph. D., Director
Kendall Demonstration Elementary School
Washington, D.C. 20002

ASSOCIATE EDITOR

David Tweedie, Ed. D.
Assistant Professor of Education
Gallaudet College
Washington, D.C. 20002

CONSTITUTION OF THE CONVENTION OF AMERICAN INSTRUCTORS OF THE DEAF

PREAMBLE

We, the members of the Convention of American Instructors of the Deaf, Incorporated, in order to secure the harmonious union of all persons actually engaged in educating the deaf in the United States and Canada, to utilize all means possible to provide such persons opportunities for the free interchange of views concerning the methods and means of educating the deaf, to promote the education and welfare of the deaf and to enhance the professional status of its members, do hereby adopt this Constitution.

ARTICLE I. NAME, GOALS AND AUTHORITIES OF GOVERNANCE

SECTION 1. *Name.*—The name of this organization shall be the Convention of American Instructors of the Deaf, Incorporated, hereinafter referred to as the "CAID."

SEC. 2. *Goals.*—The goals of the CAID shall be as stated in the preamble. The CAID shall use all legally permissible power necessary and appropriate to take action for the attainment of these goals. Nothing in this constitution nor in the bylaws shall be construed to prevent the CAID from pursuing objectives which are consistent with its stated goals.

SEC. 3. *Governance.*—The CAID shall be governed by its articles of incorporation, this constitution, the bylaws and such actions as the Executive Committee may take consistent therewith.

ARTICLE II. MEMBERSHIP

Membership in the CAID shall comprise a class of active members, and such other classes as may be provided in the bylaws.

SECTION. 1. *Membership eligibility.*—provisions and limitations.

a. Membership shall be open to individuals as provided in the bylaws.

b. An application for membership shall be subject to review as provided in the bylaws.

c. The CAID shall not deny membership to individuals on the basis of age, race, color, creed, national origin or sex.

SEC. 2. All rights, title, and interest, both legal and equitable, of a member in and to the property of the CAID shall end upon termination of his membership.

ARTICLE III. OFFICERS

The officers of the CAID shall be the President, President-elect, Secretary, and Treasurer.

SECTION 1. *Qualifications for officers.*—All candidates for officers shall have been active members of the CAID for at least five (5) years immediately preceding election. All officers shall maintain active membership in the CAID.

SEC. 2. *Elections and terms of office.*—A President-elect, a Secretary, and a Treasurer shall be elected during the year of the biennial meeting. These officers serve two-year terms, or until their successors take office effective immediately following the close of the Convention (biennial meeting).

SEC. 3. *Vacancies.*—Vacancies occurring by reason of death, resignation, incapacity or other disqualification shall be filled as follows:

a. A vacancy in the office of President shall be filled by the President-elect.

b. Vacancies in the offices of President-elect, Secretary or Treasurer shall be filled by the Executive Committee.

ARTICLE IV. DIRECTORS

SECTION 1. *Number.*—The CAID shall have six (6) Directors.

SEC. 2. *Qualifications and terms of office.*—

a. All candidates for Directors shall have been active members of the CAID for at least three (3) years immediately preceding the election.

b. At least three (3) Directors shall be classroom teachers at time of election.

c. Directors shall represent a geographical balance and a variety of programs.

d. Three (3) Directors shall be elected to four-year (4) terms during the year of the biennial meeting.

e. Directors shall not be officers.

SEC. 3. *Vacancies.*—Vacancies occurring among the Directors shall be filled by the Executive Committee.

ARTICLE V. EXECUTIVE COMMITTEE

The President, President-elect, Secretary, Treasurer, six (6) Directors and the Immediate Past President shall constitute the Executive Committee.

ARTICLE VI. MEETINGS

SECTION 1. Regular meetings of the CAID shall be held biennially, during odd-numbered years.

SEC. 2. Local or other meetings of the CAID may be convened at the discretion of the Executive Committee.

ARTICLE VII. PUBLICATIONS

SECTION 1. There shall be at least one official publication of the CAID.

ARTICLE VIII. AMENDMENTS

SECTION 1. The method of amending this Constitution shall be by mail ballot, provided proposed amendments have been submitted in writing to the Resolutions Committee for submission to the membership, and provided further that such amendments are consistent with the goals and objectives of the CAID.

SEC. 2. A ballot containing the proposed amendment shall be mailed to each member on record as of January 1 of the current calendar year at least two (2) months following notification and explanation of the amendment in the official publication.

SEC. 3. An amendment shall become effective when approved by at least 150 or two-thirds, whichever is greater, of the valid ballots returned to the Election Committee by the membership.

ARTICLE IX. EFFECTIVE DATE

This Constitution shall become effective immediately upon its adoption.

BYLAWS

1. MEMBERSHIP

1.1 *Individual memberships.*—There shall be five (5) classes of individual memberships in the CAID: Active, associate, retired, student, and honorary.

a. Active membership shall be open to persons in the USA and Canada directly engaged in the education of the deaf.

b. Associate membership shall be open to persons engaged in fields of endeavor closely related to the education of the deaf, and to those engaged in education of the deaf in foreign countries.

c. Retired membership shall be open to any retired member who has held active membership in the CAID for at least fifteen (15) years immediately prior to retirement.

d. Student membership shall be open to any student enrolled in a professional preparation program in an accredited college or university.

e. Honorary membership may be granted for distinguished services to the deaf.

1.2. *Affiliate membership.*—The Executive Committee may grant approval to an appropriate group which applies for affiliation with the CAID with the provision that it subscribes to the principles and goals of the CAID, abides by the CAID constitution and bylaws, and pays annual dues to the CAID.

1.3. *Rights and limitations.*—

a. The right to vote and to hold office shall be limited to active members.

b. Membership in all classes shall be limited to persons who subscribe to the principles and goals of the CAID, abide by its constitution and bylaws, and pay the prescribed dues.

c. All classes of membership except honorary and affiliate shall receive the official publication of the CAID and such other publications as authorized by the Executive Committee.

d. Members in all classes may serve on committees.

1.4. *Membership year.*—The membership year shall be from January 1 to December 31.

1.5 *Membership dues.*—

a. Dues of active and associate members shall be fifteen (15) dollars yearly, of which not more than ten (10) dollars shall be designated as support for the official publication. If husband and wife are both members of the CAID the dues for the couple shall be twenty-two dollars and fifty cents (22.50) yearly, of which not more than ten (10) dollars shall be designated as support for the official publication, and they will receive only one copy thereof.

b. Dues of retired members shall be seven dollars and fifty cents (7.50) yearly, of which not more than five (5) dollars shall be designated as support for the official publication.

c. Dues of student members shall be ten (10) dollars yearly, of which not more than seven dollars and fifty cents (7.50) shall be designated as support for the official publication.

d. Dues of affiliated groups shall be one dollar fifty cents (1.50) multiplied by the number of members (a family being counted as one member) of such group.

e. Honorary members shall pay no dues.

f. All dues shall be payable January 1 of each year.

2. MEETINGS

2.1. The membership attending regular meetings shall consider, and may act upon, all matters which are properly brought before it.

2.2. A quorum at a regular meeting shall be at least 100 active members.

3. OFFICERS AND DIRECTORS

3.1. *President: Duties.*—The President shall preside at the meetings of the CAID and of the Executive Committee and shall have general care and oversight of the affairs of the CAID subject to the approval of the executive committee. He shall serve as a member of the Executive Committee for two (2) years following completion of his term as President. He shall be an ex-officio member of all other committees.

3.2. *President-elect: Duties and Succession.*—

a. The President-elect shall perform the duties of the President during his absence or disability.

b. He shall be responsible for the biennial meeting program, and serve as chairman of the program committee.

c. He shall assume the office of President upon completion of his term.

3.3. *Secretary: Duties.*—As long as a national office is maintained, the Secretary shall be responsible for the minutes of meetings of the CAID and of the Executive Committee.

3.4. *Treasurer: Duties.*—As long as a national office is maintained, the Treasurer shall monitor the financial affairs of the CAID and insure that an annual audit is conducted.

3.5. *Directors: Duties.*—Directors shall serve as member of the Eexcutive Committee.

3.6. *Elections and terms of office.*—Officers and Directors shall be elected by mail balloting carried out in the following manner:

a. Prior to February 1 of the year of the biennial meeting, the Nominations Committee shall prepare and mail to each active member of record as of January 1, an official ballot listing at least two for each office. Space on the ballot will be provided for write-in votes.

b. Forty-five days after the mailing of the ballot, the President shall close the election.

c. The Election Committee shall arrange for counting the votes and certifying the elected officials.

d. Nominees receiving a plurality vote of the ballots cast shall be declared elected.

e. In case of tie votes, the Executive Committee shall cast the deciding vote as a unit.

4. EXECUTIVE COMMITTEE

4.1 *Functions.*—The Executive Committee shall have the power to make decisions and take actions consistent with the provisions of the CAID's constitution and bylaws and actions of the regular meetings.

a. It shall, upon recommendation of the Executive Secretary, approve or reject for cause applications for membership, and make assignments to membership classes, in accordance with guidelines authorized by the Executive Committee.

b. It shall direct the conduct of the necessary business of the CAID between regular meetings. Six (6) members shall constitute a quorum for conducting the business of the CAID.

c. It shall authorize an independent audit annually of the CAID's financial activities.

d. It shall arrange for adequate bonding of the Executive Secretary and such other employees as may be required.

e. It shall meet during the period specified for the biennial meetings of the CAID and at such other times as may be required.

f. It shall discharge such other duties as the membership may assign to it.

4.2 *Vacancies.*—The Executive Committee shall be authorized to fill vacancies in its body until the next regular meeting of the CAID, except for the office of President, which shall be filled by the President-elect.

5. NATIONAL OFFICE

5.1 *Establishment and location.*—The CAID shall maintain a national office, independently or in cooperation with other associations, in the Washington, D.C., area.

5.2 *Governance.*—The activities of the national office shall be directed by the Executive Secretary, under the supervision of the Executive Committee.

5.3 *Discontinuance.*—Should the national office become inoperative, the Secretary and the Treasurer shall assume full responsibility for duties assigned such officers by the Executive Committee, and any assets held by the national office in the name of the CAID shall be disposed of by action of the Executive Committee.

6. EXECUTIVE SECRETARY AND STAFF

6.1 *Executive Secretary.*—The Executive Committee shall employ an Executive Secretary who shall be the chief administrative officer of the CAID.

6.2 *Executive Secretary: Functions.*—The Executive Secretary shall:

a. Be responsible for conducting the day-to-day business of the CAID.

b. Serve as a source of information.

c. Employ, direct, and supervise the National Office.

d. Inform the officers and directors quarterly on fiscal matters, and report at the regular meetings of the CAID the activities of his office since the previous meeting.

e. Maintain membership lists, provide renewal notices and furnish each member with evidence of his membership.

f. Supervise the production and distribution of the proceedings of biennial meetings of the CAID in accordance with budget provisions.

g. Serve as the business manager of the official publications.

h. Perform such other duties as may be assigned by the Executive Committee.

6.3 *Staff.*—The CAID shall be an equal opportunity employer.

7. COMMITTEES

7.1 The CAID shall have the following committees: Nomination, Election, Membership, Resolutions, Program, and Legislation. Other committees shall be established at the discretion of the Executive Committee, or by the membership at a regular meeting.

7.2 *Committees: Duties.*—

a. The Nomination Committee, consisting of not less than five (5) members appointed by the President not less than six (6) months prior to a scheduled election, shall prepare, publicize and present a slate of eligible candidates for officers and directors to be elected by mail ballot as is provided in these bylaws.

b. The Election Committee, consisting of not less than three (3) members appointed by the President not less than six (6) months prior to a scheduled election shall be responsible for tallying, reporting and certifying the election of

CAID officers, directors and constitution and bylaw amendments in accordance with these bylaws.

c. The Membership Committee, consisting of five (5) or more members appointed by the President, shall develop services and promote membership in the CAID.

d. The Resolutions Committee, consisting of three (3) or more members appointed by the President, shall receive written resolutions, including constitution and bylaw amendments, shall prepare resolutions as required by the President or the Executive Committee and, if needed, initiate resolutions, all for presentation at regular meetings of the CAID for action.

e. The Program Committee, consisting of five (5) or more members appointed by the President-elect, with the consent of the President, shall prepare and execute the program for the biennial meeting. The President-elect shall serve as chairman of the committee.

f. The Legislation Committee, consisting of five (5) or more members appointed by the President, shall examine legislation affecting the educational programs for the deaf and take appropriate action if indicated, such action subject to the approval of the Executive Committee.

8. JOINT COMMITTEES

8.1 The CAID shall participate in the following joint committee activities:

a. The Joint Administrative Committee, AMERICAN ANNALS OF THE DEAF.—The President shall appoint three (3) members representing the CAID to serve with representatives of the Conference of Executives of American Schools for the Deaf, Incorporated. The Committee shall be responsible for the management and fiscal support and control of the ANNALS and shall elect its editor(s) who shall perform such duties as may be prescribed. Appointment(s) of the editor(s) shall be for terms of three (3) years, and shall be renewable.

b. The Joint Committee, Council on Education of the Deaf.—The President, together with three (3) other members of CAID appointed by him, shall serve on the Executive Board of the Council on Education of the Deaf.

c. Any other joint committees, as authorized.

9. SECTIONS

9.1 The President, with the concurrence of the Executive Committee, shall designate such sections as seem advisable for the functioning of the CAID.

9.2 Each section of the CAID shall have a constitution and bylaws and such membership, directors, officers, and activities, or organizational structure consistent and compatible with the goals and objectives of the CAID and approved by the Executive Committee. Members of each section shall be members in good standing of the CAID.

10. OFFICIAL SEAL

10.1 The seal of the CAID shall be permanently retained in the national office.

11. PROCEDURE FOR MEETINGS

11.1 Robert's Rules of Order shall be a guide for all parliamentary proceedings not herein provided for. The President may, at his sole discretion, appoint a parliamentarian to rule upon procedures at meetings.

12. AMENDMENTS

12.1 The method of amending these bylaws shall be by mail ballot; provided proposals for amendments have been submitted in writing to the Resolutions Committee for placement on the ballot.

12.2 A ballot containing the proposed amendment shall be mailed to each member of record on January 1 of the current calendar year at least two (2) months following notification and explanation of the amendment in the official publication.

12.3 An amendment shall become effective when it has been approved by at least 150 or the majority, whichever is the greater, of the valid ballots returned to the Election Committee.

13. BEQUEST

13.1 Devises and bequests may be worded as follows: "I give, devise, bequeath to the Convention of American Instructors of the Deaf, Incorporated, for the promotion of the cause of education of the deaf, in such manner as the Executive Committee thereof may direct . . .", etc.; and if there be any conditions, and "subject to the following conditions, to wit:".

14. DISSOLUTION

14.1 Upon dissolution of the CAID after payment of all valid debts and obligations, all assets shall be distributed as directed by the Executive Committee to any organization organized and operated exclusively for religious, charitable, education or scientific purposes.

15. EFFECTIVE DATE

15.1 These bylaws shall become effective immediately upon their adoption with the exception of the mail ballot specified in 12.3. Balloting at the 1975 convention will be carried out in accordance with Article V, Section 5 of the previous constitution, as amended in 1969.

MEMBERS OF THE CONVENTION OF AMERICAN INSTRUCTORS OF THE DEAF

MEMBERSHIP LIST 1975

Edward R. Abernathy, Columbus, Ohio—*Life Member*

A

Abbott, Carrie, Austin, Tex.
Abbruzzese, Carmela A., Randolph, Mass.
Abdoe, Marilyn L., Pittsburgh, Pa.
Abell, Charlotte T., Dolton, Ill.
Abernathy, Nelson M., Morganton, N.C.
Abernethy, Sarah H., Riverside, Calif.
Abijay, Azucena G., Glendale, Calif.
Achtzehn, Jr., James C., Washington, D.C.
Acker, Eldora L., Hickory, N.C.
Acuna, Darlene, Tucson, Ariz.
Adamo, Beverly L., Upper Marlboro, Md.
Adams, Barbara T., Olathe, Kans.
Adams, Diane, Washington, D.C.
Adams, Ellery, Downey, Calif.
Adams, F. Wayne, Lincoln, Nebr.
Adams, Kirk L., Las Vegas, Nev.
Adams, Lucille S., Danville, Ky.
Adams, Margaret C., San Antonio, Tex.
Adams, Michael R., Pittsburgh, Pa.
Adams, Paul R., St. Augustine, Fla.
Aden-Wansbury, Marsha, Los Angeles, Calif.
Adler, Carolyn T., Honolulu, Hawaii
Adler, Gerald, Washington, D.C.
Adler, Judy, Sioux Falls, S. Dak.
Adonnino, Andrea M., Rochester, N.Y.
Adrian, Jr., Herbert J., Romney, W. Va.
Affleck, Marie A., West Trenton, N.J.
Aggers, Marjorie, Spartanburg, S.C.
Agines, Joan B., New York, N.Y.
Ahern, Kathleen, Portland, Oreg.
Ahlstrom, Karen, Madera, Calif.
Aiken, Marian K., Romney, W. Va.
Ainbender, Hilary R., Newark, Del.
Aiso, Katherine Y., Los Angeles, Calif.
Akin, Eli C., Knoxville, Tenn.
Akin, Lucy L., Knoxville, Tenn.
Akins, Juanita W., Raleigh, N.C.
Alber, Melda, Council Bluffs, Iowa
Albert, Dorothy M., Scranton, Pa.
Albright, Michael J., Fresno, Calif.
Alby, Fr. James F., Milwaukee, Wisc.
Aldridge, Ann H., Morganton, N.C.
Aldridge, Lita D., Newark, Del.
Alexander, Alma L., Jackson, Miss.
Alexander, Elaine, Knoxville, Tenn.
Alexander, Frances, Fulton, Mo.
Alexander, Jeaneal, Fulton, Mo.
Alexander, Robert, Fulton, Mo.
Alfers, Robert, Olathe, Kans.
Alford, Marydel S., St. Augustine, Fla.
Alfred, Doris R., Baton Rouge, La.
Allegood, Freida N., Wilson, N.C.
Allen, Elizabeth, Charlottesville, Va.
Allen, Norman K., Colorado Springs, Colo.
Allen, Shirley J., Rochester, N.Y.
Allen, Terri, Denver, Colo.
Alles, Brian F., Columbus, Ohio
Allison, DiAnne, Dallas, Tex.
Almasy, Jane E., Pittsburgh, Pa.
Alsobrook, James V., St. Augustine, Fla.
Alter, Winona B., Indianapolis, Ind.
Altman, Ellen, Rochester, N.Y.
Alvarez, Adoracion A., Salem, Oreg.
Amato, Linda, Frederick, Md.
Ambrose, William R., Athens, Ga.
Amelotte, Gerald, Portland, Maine
Amon, Carol F., Denver, Colo.
Anast, Mary, Pittsburgh, Pa.
Andersen, Sandra, Sioux Falls, S. Dak.
Anderson, Barbara A., Davenport, Iowa
Anderson, Janet, Jacksonville, Ill.
Anderson, Leslie R., Newark, Del.
Anderson, Mary M., Jacksonville, Ill.
Anderson, Peter E., Salem, Oreg.
Anderson, Robert R., Jacksonville, Ill.
Anderson, Sherri, Omaha, Nebr.
Anderson, Thelma A., Los Angeles, Calif.
Anderson, Thomas B., Oxford, Ohio
Andersson, Yerker J. O., Washington, D.C.
Andresen, Erlene L., Seattle, Wash.
Andrews, Ann G., Raleigh, N.C.
Andrews, Jean, Westminster, Md.
Andrues, James W., Beaverton, Oreg.
Angel, Bettye J., Cave Spring, Ga.
Angel, Lynne I., Portland, Oreg.
Annala, Linda V., Jacksonville, Ill.
Annis, Frank K., New York, N.Y.
Anthony, David A., Greeley, Colo.
Antia, Shirin D., Pittsburgh, Pa.
Anton, Jeannette M., Jacksonville, Ill.
Antoni, Erwin J., Philadelphia, Pa.
Aoyama, Henry T., Seattle, Wash.
Apodaca, Patricia E., Las Vegas, Nev.
Appelman, Karen I., Mountainlake Terrace, Wash.
Apple, Carol H., Morganton, N.C.
Apple, William G., Morganton, N.C.
Arboneaux, Bernice A., Baton Rouge, La.
Arbuthnot, Helen, Berkeley, Calif.
Archer, Anne B., Towson, Md.

Archer, Paula, San Antonio, Tex.
Arensmeier, Wilma F., Salem, Oreg.
Arkebauer, Herbert J., Mill Neck, N.Y.
Armstrong, Julia, Morganton, N.C.
Armstrong, Norma D., Jacksonville, Ill.
Arney, Jean S., Morganton, N.C.
Arnold, Carol A., Santa Ana, Calif.
Arnold, Floris W., Compton, Calif.
Arnold, Geraldine E., Romney, W. Va.
Arnold, Phyllis D., San Antonio, Tex.
Arnold, Rhea V., Romney, W. Va.
Arnold, Susanne F., Reston, Va.
Arnst, Dennis J., Fresno, Calif.
Aronson, Mary M., Juneau, Alaska
Arrasmith, Janet, Santa Fe, N. Mex.
Arrington, Rebecca, Tucson, Ariz.
Asbell, Abby W., White Plains, N.Y.
Aseltine, Lorraine H., Lombard, Ill.
Ashburn, Pamala A., Morganton, N.C.
Ashby, Charmon, San Jose, Calif.
Asklar, Francis J., W. Hartford, Conn.
Aster, Terry, Bayside, N.Y.
Atchison, Jr., James C., Berkeley, Calif.
Atchley, Teena, Buena Park, Calif.
Atherton, Louise T., Spartanburg, S.C.
Athey, Judy, Frederick, Md.
Atkins, Dale V., Los Angeles, Calif.
Atkinson, Catherine N., Dallas, Tex.
Attletweed, Bernadette, Berkeley, Calif.
Attletweed, Jr., George O., Berkeley, Calif.
Aubry, Donald L., Jacksonville, Ill.
Auerbach, Chana K., Morristown, N.J.
Auerbach, Hortense, Washington, D.C.
Auerbach, Leon, Washington, D.C.
August, Mattie, Olathe, Kans.
Aull, Sharon M., Phoenix, Ariz.
Austin, Jerelean, Jackson, Miss.
Austin, Leslie M., W. Trenton, N.J.
Avery, Charlotte B., Pittsburgh, Pa.
Avery, Mildred, Scranton, Pa.
Ayala, Ray D., Vancouver, Wash.
Ayers, Nancy E., Raleigh, N.C.
Ayers, Sybil M., Spartanburg, S.C.
Ayers, Susie K., Olathe, Kans.

B

Bachus, Kathleen K., Philadelphia, Pa.
Bacon, Jeanette H., Santa Ana, Calif.
Badamy, Joseph R., Rochester, N.Y.
Bagwell, Beth E., Washington, D.C.
Bahl, Patricia, Omaha, Nebr.
Bailey, Clark, Detroit, Mich.
Bailey, David N., Indianapolis, Ind.
Bailey, Nancy J., Indianapolis, Ind.
Balm, William A., Berkeley, Calif.
Bain, Barbara S., Alhambra, Calif.
Baird, Kathryn D., Buena Park, Calif.
Baird, Marjorie G., Milwaukee, Wis.
Baird, Terry, Washington, D.C.
Baitty, Kathleen D., Upper Marlboro, Md.
Baker, Bernice S., Houston, Tex.
Baker, Celeste S., Los Angeles, Calif.
Baker, Dinah L., Dallas, Tex.
Baker, Gordon, Rome, N.Y.
Baker, Mary V., Fulton, Mo.
Baker, Patricia, Knoxville, Tenn.
Baker, Robert W., Sugar Grove, Ill.
Baker, Stanley C., Washington, D.C.
Baker, Thomas, Washington, D.C.
Balas, Robert F., Washington, D.C.
Balasa, Mary E., Danville, Ky.
Baldwin, Celia M., Ogden, Utah
Baldwin, Frankie, Sulphur, Okla.
Baldwin, Patricia, Sulphur, Okla.
Baldwin, Stephen C., Ogden, Utah
Baldwin, Virginia H., W. Hartford, Conn.
Balfour, Louis, Chevy Chase, Md.
Balfour, Mildred, Chevy Chase, Md.
Ballard, Carolyn, Santa Fe, N. Mex.
Baltzer, Susanna, Washington, D.C.
Bambach, Dorothy S., Scranton, Pa.
Band, Meredith, Fulton, Mo.
Bandy, Betty B., Alhambra, Calif.
Banks, Wilhelmina B., Capitol Heights, Md.
Banta, Harriett G., St. Augustine, Fla.
Baral, Gloria, Los Angeles, Calif.
Baran, Loretta R., Erie, Pa.
Barasch, Judith E., Arlington Heights, Ill.
Barbee, Margaret A., Minneapolis, Minn.
Barber, E. Carl, Riverside, Calif.
Barber, Mrs. E. Page, Riverside, Calif.
Barefield, Mary D., Austin, Tex.
Barh[illegible]a, Dorothy J., St. Augustine, Fla.
Barker, Barbara L., Riverside, Calif.
Barkley, Bettye L., Jackson, Miss.
Barner, John C., Guilderland, N.Y.
Barnes, Ann F., Wilson, N.C.
Barnes, Connie B., Talladega, Ala.
Barnes, Marjorie, Fulton, Mo.
Barnes, Nelda K., Spartanburg, S.C.
Barnes, Ralph, Spartanburg, S.C.
Barnes, Ronald G., Los Angeles, Calif.
Barnhardt, Barbara A., Hickory, N.C.
Barnhill, Sandra S., Washington, D.C.
Barr, Anne Y., Greenfield, N.H.
Barrett, Marsha, Olathe, Kans.
Barrey, Sharon D., Allegany, N.Y.
Barry, Sr. Virginia, Lake Ronkonkoma, N.Y.
Bartel, Eveline G., Danville, Ky.
Barth, Miriam J., Buffalo, N.Y.
Bartlett, Linda T., Agana, Guam
Bartu, Paul S., Milton, Ontario, Canada
Bartz, Lettie L., Biloxi, Miss.
Barwick, Dorothea C., Cranston, R.I.
Basnett, Lanola, Fulton, Mo.
Batali, Sue, Tacoma, Wash.
Batchelder, Patricia M., Riverside, Calif.
Bateman, Jr., Gerald, Rochester, N.Y.
Bateman, Leslie M., Rochester, N.Y.
Bates, Joanne, Omaha, Nebr.
Bathory, Connie J., Newark, Del.
Batshaw, Marilyn D., Millburn, N.J.

Batstone, Gary, Winnipeg, Manitoba, Canada
Batt, Sr. Doris Marie, Lake Ronkonkoma, N.Y.
Battersbee, Hazel W., Devonshire West, Bermuda
Battison, Robbin M., Washington, D.C.
Battle, Raymond N., Knoxville, Tenn.
Battles, Jane L., Paramus, N.J.
Battles, Laura J., Milwaukee, Wis.
Battociette, Augusta R., Dayton, Ohio
Baucom, Kathrir C., Concord, N.C.
Baumbach, Nancy K., Tucson, Ariz.
Baumert, Hans-Dieter, Frederick, Md.
Bavister, Mary A., Harrisonburg, Va.
Bay, Susan J., Rochester, N.Y.
Bayless, Elizabeth, Santa Ana, Calif.
Beach, Gail G., Morganton, N.C.
Beaird, Catherine, Cave Spring, Ga.
Beal, Cynthia C., Pittsburgh, Pa.
Beal, Marjory B., Denver, Colo.
Beam, Norman, Indianapolis, Ind
Beane, Nancy L., Austin, Tex.
Beardsley, Alicia B. Rochester, N.Y.
Bearer, Paulette, Levittown, Pa.
Beasley, Ann M., Washington, D.C.
Beasley, Edward E., Washington, D.C.
Beaver, Larry, Olathe, Kans.
Beck, Marilyn, Fulton, Mo.
Beck, Ruth G., Mill Neck, N.Y.
Becker, Bruce, Omaha, Nebr.
Becker, Glenda K., Jacksonville, Ill.
Beckmeyer, Theodore, Seattle, Wash.
Beem, Margaret M., St. Augustine, Fla.
Beggs, Barbara A., Dallas, Tex.
Beglin, Margaret Rochester, N.Y.
Behre, Sr. Anne, Brooklyn, N.Y.
Behrens, Thomas R., Washington, D.C.
Beirne, M. Patricia, Hackensack, N.J.
Belcher, Duane L., Danville, Ky.
Belcher, Janet A., Pasadena, Calif.
Belcher, Judith A., Tacoma, Wash.
Bell, Bobbie J., Riverside, Calif.
Bellanco, Sarina, Philadelphia, Pa.
Bellefleur, Philip A., Philadelphia, Pa.
Bellhorn, Janice L., Detroit, Mich.
Belser, George L., Vancouver, Wash.
Bender, Barbara, Little Rock, Ark.
Benedetto, Joseph M., Baton Rouge, La.
Benedict, Dorothy W., St. Augustine, Fla.
Benfield, Louise H., Morganton, N.C.
Bennett, Ann A., Santa Fe, N. Mex.
Bennett, Clint, Harrisonburg, Va.
Bennett, Dennis, St. Augustine, Fla.
Bennett, James W., Ventura, Calif.
Benowitz, Marceille C., Rochester, N.Y.
Benowitz, Stanley R., Rochester, N.Y.
Benson, Mary A., Frederick, Md.
Bent, Michael T., Buffalo, N.Y.
Bentley, Tommie R., Lubbock, Tex.
Benton, Lanelle, Cave Spring, Ga.
Benton, Nancy L., Sioux Falls, S. Dak.
Beranek, Zeke B., Jacksonville, Ill.
Berg, David R., Buffalo, N.Y.
Berg, Thomas O., Washington, D.C.
Bergan, Gorden W., Washington, D.C.
Bergan, Robert L., Washington, D.C.
Bergant, Margaret H., Colorado Springs, Colo.
Bergen, Claire, Fulton, Mo.
Berger, Shirley L., Parsons, Kans.
Bergin, Rev. Robert D., W. Hartford, Conn.
Bergman, Eugene, Washington, D.C.
Bergstresser, R. Henry, Washington, D.C.
Bergstrom, Dagny D., Delavan, Wis.
Berke, Albert, W. Hartford, Conn.
Berlow, Susan J., Chicago, Ill.
Bern, Martha G., Pleasant Hill, Calif.
Bernauer, James A., Pittsburgh, Pa.
Bernsen, Elaine D., Valley Center, Calif.
Bernstein, Henry W., New York, N.Y.
Bernstein, Seymour S., Riverside, Calif.
Berry, Judy S., Morganton, N.C.
Berry, Sharon R., Virginia Beach, Va.
Beson, Susan K., Grand Blanc, Mich.
Best, Faye, Danville, Ky.
Best, Joyce E., Greeley, Colo.
Best-Sigford, Barbara J., Lewisburg, Pa.
Bettis, Carmen K., Morganton, N.C.
Beverding, Donna S., Houston, Tex.
Bickett, Anne, Chicago, Ill.
Bickford, Barbara J., Houston, Tex.
Biddle, Karen, Pittsburgh, Pa.
Biggerstaff, Shirley A., Olathe, Kans.
Bigham, Meta, Morganton, N.C.
Billings, Ella W., Morganton, N.C.
Billings, Wendy J., Santa Ana, Calif.
Birch, Jane R., Pittsburgh, Pa.
Birdsell, Ben A., Albany, N.Y.
Bishop, Charlene M., Baton Rouge, La.
Bishop, Milo E., Rochester, N.Y.
Bitsko, Edward A., Danville, Ky.
Bittner, Susan G., St. Augustine, Fla.
Bjorlie, Henry, Rome, N.Y.
Black, Frances J., Little Rock, Ark.
Black, Suzanne D., Denton, Tex.
Blackinton, Jill W., Boston, Mass.
Blair, James A., Battle Creek, Mich.
Blake, Anita M., Tucson, Ariz.
Blakeslee, Edith A., Rochester, N.Y.
Blanchard, Janet M., Baton Rouge, La.
Blatt, Mary J., Woodbridge, Va.
Blattner, Evangeline, Fulton, Mo.
Blaustein, Janet, Newark, N.J.
Bledsoe, Neal J., Tucson, Ariz.
Bleifuss, Mary Ellen, Fulton, Mo.
Blessington, Lois V. Anchorage, Alaska
Blethen, Laura K., Richmond, Calif.
Bleuer, Ann J., Milwaukee, Wis.
Blevins, Bill G., Northampton, Mass.
Blevins, Brett A., Staunton, Va.
Bloker, Paula K., Salem, Oreg.
Blue, Burnell J., Little Rock, Ark.
Blum, Mary B., Spartanburg, S.C.
Blume, Darwin, Faribault, Minn.
Bochner, Joseph, Rochester, N.Y.
Bodner, Barbara A., Syracuse, N.Y.

Boello, Joanna B., Bloomfield Hills, Mich.
Boesen, K. W., Edmonton, Alberta, Canada
Boesen, Suzanne L., Edmonton, Alberta, Canada
Boger, Sue S., Columbia, S.C.
Boles, Virginia, Baton Rouge, La.
Bolesta, Ethel M., Tampa, Fla.
Boley, Louis M., Romney, W. Va.
Boley, Marjorie L., Romney, W. Va.
Bolf, Marjorie, Gooding, Idaho
Bolin, Cheryl D., Denton, Tex.
Boltz, Robert H., New Orleans, La.
Bonar, Patricia A., Romney, W. Va.
Bonds, James D., Jacksonville, Ill.
Bone, Jo Lynn, Wilson, N.C.
Bonito, Antonio, St. Augustine, Fla.
Bontrager, Robert, Salem, Oreg.
Bonura, Helene K., Brattleboro, Vt.
Boon, Olivian B., Durham, N.C.
Bordelon, Diane, Baton Rouge, La.
Borden, Mary S., Gooding, Idaho
Bordman, Marcia B., Washington, D.C.
Borron, Roberta A., Austin, Tex.
Borstein, Suzanne S., Providence, R.I.
Bortner, Deborah A., W. Trenton, N.J.
Bosch, Audrey, Fulton, Mo.
Bosch, Kenneth L., DeKalb, Ill.
Bosley, Lucy P., Danville, Ky.
Bostetter, Sandra F., Lombard, Ill.
Bosworth, Margaret W., Gambrills, Md.
Bottini, Elizabeth A., Rome, N.Y.
Botz, A. Therese, Washington, D.C.
Bouchard, Evadna B., Rochester, N.Y.
Boudreau, Philip J., Chicago, Ill.
Bourget, Alfred C., Greenfield, N.H.
Bourne, Janet, Omaha, Nebr.
Bouvet, Leticia, Santa Fe, N.M.
Bowe, Phyllis B., White Plains, N.Y.
Bowen, Ellen, Columbia, Md.
Bowen, Frank, Columbia, Md.
Bower, Terri S., Tucson, Ariz.
Bowers, David, Sulphur, Okla.
Bowns, Barbara A., Altadena, Calif.
Box, Mattie L., Ft. Worth, Tex.
Boyd, Barbara, Northridge, Calif.
Boyd, Mary R., Bloomsburg, Pa.
Boyer, Carol L., Springfield, Oreg.
Boyer, Michele C., Rochester, N.Y.
Boyer, Nyda C., Riverside, Calif.
Boyett, JoDeane, Lubbock, Tex.
Boze, Charlotte Y., Springfield, Ohio
Bracy, David, Portland, Maine
Braden, Jeffery P., Washington, D.C.
Bradfield, Patricia A., Alhambra, Calif.
Bradford, Cathy, Sulphur, Okla.
Bradford, Erelene L., Baton Rouge, La.
Bradford, Rosalind, Santa Fe, N. Mex.
Bradford, Wallace L., Baton Rouge, La.
Bradley, Maryellen F., Brooklyn, N.Y.
Bradley, M. Sandra, Berkeley, Calif.
Bradley, Raymond W., Northridge, Calif.
Bradley, Ruth C., Jacksonville, Ill.
Brady, Jack W., Romney, W. Va.
Brady, Lorraine V., Tucson, Ariz.
Branch, Hattie L., Hampton, Va.
Brandenburg, Barbara L., Dallas, Tex.
Branigar, Harley W., Monmouth, Oreg.
Brannan, Clark, Abilene, Tex.
Branson, Mark A., Chickasha, Okla.
Branson, Virginia M., New Oxford, Pa.
Brant, Donald G., Dallas, Tex.
Brasel, Barbara, Hartford, Conn.
Brasel, Kenneth E., W. Hartford, Conn.
Brasel, Laural, Sioux Falls, S. Dak.
Brasel, Melvin H., Faribault, Minn.
Brasel, Ronald, Sioux Falls, S. Dak.
Braucht, Patricia L., Philadelphia, Pa.
Braun, Elizabeth C., Pittsburgh, Pa.
Brawer, Kathryn, State College, Pa.
Bray, Elvira, Cave Spring, Ga.
Breckenridge, Nancy E., Merced, Calif.
Breeden, Carolyn, Olathe, Kans.
Breitwieser, Joseph V., Napa, Calif.
Brelje, H. William, Portland, Oreg.
Brendle, Josephine M., Morganton, N.C.
Brenner, Debra, Clarkston, Ga.
Bresnahan, Jane, Omaha, Neb.
Brewer, Mary E., Jacksonville, Ill.
Brewer, Mary V., Jacksonville, Ill.
Brick, Lawrence J., Jacksonville, Ill.
Bridges, John S., Morganton, N.C.
Bridges, Ruth C., Morganton, N.C.
Bridges, Sharon L., Jackson, Miss.
Bright, Laura S., Morganton, N.C.
Brightwell, Randal, Paragould, Ariz.
Brill, Richard G., Riverside, Calif.
Bringer, Stanton J., Berkeley, Calif.
Brininstool, Carl, Austin, Tex.
Broadbent, Miriam R. Jefferson, Ohio
Brock, Opal K., Nevada, Mo.
Brocklebank, Joanne L., Hickory, N.C.
Brook, Betty B., Rochester, N.Y.
Brooks, Frances S., Meadville, Pa.
Brooks, Mildred, Rochester, N.Y.
Brothers, Susan G., Hickory, N.Y.
Broussard, Herman J., St. Augustine, Fla.
Brouwer, Jean M., Chicago, Ill.
Brown, Amanda, San Diego, Calif.
Brown, Anna P., Little Rock, Ark.
Brown, Betty J., Knoxville, Tenn.
Brown, David W., Worcester, Mass.
Brown, G. Lynette, Long Beach, Calif.
Brown, Janice, Seattle, Wash.
Brown, Kenneth D., Sulphur, Okla.
Brown, McKay W., Staunton, Va.
Brown, Nannie R., Staunton, Va.
Brown, Norman S., Indianapolis, Ind.
Brown, Richard W., Austin, Tex.
Brown, Robert, Sioux Falls, S. Dak.
Brown, Ruth F., Santa Fe, N. Mex.
Brown, Sharon, Fulton, Mo.
Brown, Shirley, Olathe, Kans.
Brown, Tary L., Jacksonville, Ill.
Browning, Ruth D., Louisville, Ky.
Bruce, Linda L., Houston, Tex.
Brueck, Janet H., Savannah, Ga.
Brueggeman, Dorothy A., Olathe, Kans.
Bruflat, Barbara E., Marshall, Minn.

Bruhns, Arthur E., Rhinelander, Wis.
Brumfield, Shannon M., Gainesville, Fla.
Brunjes, Adele, Mill Neck, N.Y.
Bruster, Alice, Sulphur, Okla.
Bryant, Goldie S., Spartanburg, S.C.
Bryant, Katie B., Baton Rouge, La.
Bryant, Vireginer, Cave Spring, Ga.
Brych, Jacqueline, Buffalo, N.Y.
Bubser, Evelyn M., Bloomsburg, Pa.
Buchbinder, John S., Buffalo, N.Y.
Buchmann, Adella, Olathe, Kans.
Buckley, Jeannette, Philadelphia, Pa.
Budynski, Constance, Westminster, Md.
Bugden, Sr., M. Bridget, San Antonio, Tex.
Bull, Thomas H., Washington, D.C.
Bullock, Donald M., Berkeley, Calif.
Bultman, Br. Frederick, New York, N.Y.
Bunch, Dr. G., Saskatoon, Sask., Canada
Burch, Daniel D., Washington, D.C.
Burco, Mary E., Vancouver, Wash.
Burianek, Lynn A., Pueblo, Colo.
Burke, Harry C., Flint, Mich.
Burke, Leo A., W. Hartford, Conn.
Burke, Mary E., Randolph, Mass.
Burke, Mary M., Brooklyn, N.Y.
Burke, Michael C., Brattlesboro, Vt.
Burke, Sr. M. Winifred, Randolph, Mass.
Burke, Rosemary M., Pittsburgh, Pa.
Burkett, Karen L., Frederick, Md.
Burkhart, Susan M., Muncie, Ind.
Burley, Jr., Marvin M.,Wilson, N.C.
Burley, Sallie A., Wilson, N.C.
Burnet, Eugenia, Jackson, Miss.
Burnham, Nora E., Greeley, Colo.
Burnly, Donna W., Danville, Ky.
Burns, Elouise R., New Orleans, La.
Burns, Gladyce B., Devils Lake, N. Dak.
Burns, Margaret A., Kansas City, Kans.
Burns, Mary A., Grandview, Mo.
Burns, Rebecca A., Rochester, N.Y.
Burns, Mrs. Sam, Little Rock, Ark.
Burroughs-Keith, Judith, Dallas, Tex.
Burstein, Gerald, Riverside, Calif.
Burt, Grace Q., Jackson, Miss.
Busby, Howard R., Milwaukee, Wis.
Busch, Carol L., Olathe, Kans.
Bushey, Norma M., Morganton, N.C.
Butin, Flo A., San Francisco, Calif.
Butkus, Marie M., Morganton, N.C.
Butler, Gloria C., Spartansburg, S.C.
Butler, Gwendel D., Austin, Tex.
Butler, John W., Richardson, Tex.
Butler, Margot J., Salt Lake City, Utah
Butler, Marguerite E., St. Augustine, Fla.
Butler, Raymond D., St. Augustine, Fla.
Butterfield, Billie, Ogden, Utah
Butterweck, Thomas C., Jacksonville, Ill.
Butts, Geraldine, Jackson, Miss.
Buzanowski, Fr. Donald J., Green Bay, Wis.
Buzonas, Deborah, Pittsburgh, Pa.
Buzzard, Henry L., White Plains, N.Y.
Bye, Holly E., Rockville, Md.
Byers, Lois A., Chicago, Ill.
Bynum, Donald F., Charlotte, N.C.

C

Cabbage, Nelly P., Gooding, Idaho
Caccamise, Frank C., Rochester, N.Y.
Cagan, Janice L., Watertown, Maine
Cain, B. Edward, Rochester, N.Y.
Caldwell, Doris C., Washington, D.C.
Caldwell, Golda E., Austin, Tex.
Call, Anne C., Morganton, N.C.
Call, Michaele D., Redwood City, Calif.
Callahan, Catherine A., Philadelphia, Pa.
Cammeron, Julie J., Rochester, N.Y.
Caniglia, Janis L., Council Bluffs, Iowa
Cannell, Norman R., Sioux Falls, S. Dak.
Cantrell, Byron D., Rome, Ga.
Cantrell, Kathleen, Cave Spring, Ga.
Capps, Rosemary, Berkeley, Calif.
Capsuto, Herman M., Tucson, Ariz.
Caputo, Mrs. Orlando F., Ventura, Calif.
Carben, Evelyn M., Pittsburgh, Pa.
Cardinal, Mary A., Rochester, N.Y.
Caridi, Elaine M., Brooklyn, N.Y
Carl, Betty J., Detroit, Mich.
Carlie, Joyce B., St. Louis, Mo.
Carlson, Helen M., San Bernardino, Calif.
Carlson, Kay, Sioux Falls, S. Dak.
Carlson, Linda P., Beverly, Mass.
Carlton, J. Raymond, Staunton, Va.
Carmen, James L., Devils Lake, N. Dak.
Carney, Edward C., Flint, Mich.
Carpenter, Carol B., Camillus, N.Y.
Carr, Agnes H., Jacksonville, Ill.
Carr, Jean, Sulphur, Okla.
Carr, Joan A., Rochester, N.Y.
Carr, Katherine K., Jacksonville, Fla.
Carr, L. Virginia, West Hartford, Conn.
Carr, Margaret T., Knoxville, Tenn.
Carrick, James R., West Trenton, N.J.
Carrington, LaVerle, Sulphur, Okla.
Carroll, Barbara A., New York, N.Y.
Carroll, Geraldine A., Elmont, N.Y.
Carrus, Darlene, Buffalo, N.Y.
Carscallen, Virginia E., Wheat Ridge, Colo.
Carson, Mary E. Jacksonville, Ill.
Carson, Pamela A., St. Augustine, Fla.
Carstens, Rev. David L., Hickory, N.C.
Carter, Barbara L., Columbia, Md.
Carter, Carlota, St. Augustine, Fla.
Carter, Donna H., Memphis, Tenn.
Carter, Janet D., Knoxville, Tenn.
Carter, Sr. Marie dePaul, Buffalo, N.Y.
Carter, Paul, Cave Spring, Ga.
Carter, S. Melvin, Jr., Raleigh, N.C.
Carter, Sharon H., Raleigh, N.C.
Carter, Virginia M., Tucson, Ariz.
Caruso, Mary D., Pittsburgh, Pa.
Casarella, Lynn, Westminster, Md.

Casey, Eunice W., Fairbanks, Alaska
Casey, Katherine, Cave Spring, Ga.
Casey, Kay, Wilson, N.C.
Cashier, Barbara R., Bronx, N.Y.
Castaneda, Carol E., Seattle, Wash.
Castle, William E., Rochester, N.Y.
Cates, Georgia K., Morganton, N.C.
Catto, Ruth N., Spartanburg, S.C.
Causby, Judy A., Morganton, N.C.
Cawili, Teresita M., Austin, Tex.
Ceccarelli, Denise, Philadelphia, Pa.
Cerasa, Alice O., Bronx, N.Y.
Chaben, Susan P., Clarendon Hills, Ill.
Chaifetz, Dana S., West Hartford, Conn.
Chalk, Phyllis R., Morganton, N.C.
Chance, Paula A., Jacksonville, Ill.
Chandler, Shirley R., Baltimore, Md.
Chann, Henry, Fairfield, Calif.
Chapman, III, Jesse P., Jacksonville, Ill.
Chapman, John K., Talladega, Ala.
Charapp, Abbylee, Pittsburgh, Pa.
Charrow, Veda, Washington, D.C.
Chase, Marlaine K., Evansville, Ind.
Cheng, Mrs. Kwok-Chi Gertrude, Washington, D.C.
Cheraso, Samuel C., Portland, Maine
Childers, Cathy R., Hickory, N.C.
Childrey, Mrs. J. Duffer, Richmond, Va.
Chilson, Judith A., Providence, R.I.
Cholewa, Elizabeth, Winnepeg, Manitoba, Canada
Chonkich, Sarah J., Farmington, Mich.
Christianson, Karen A., Northridge, Calif.
Christie, Martha G., Blacksburg, Va.
Christner, Catherine S., Pittsburgh, Pa.
Christopulos, Tony, Ogden, Utah
Chubb, Louise B., Cave Spring, Ga.
Church, Charlotte N., Annandale, Va.
Church, G. Gaye, Jackson Heights, N.Y.
Church, Robyn I., Dallas, Tex.
Chwalow, Esther L., Philadelphia, Pa.
Cinatl, Michael E., Milwaukee, Wis.
Cioffi, Cynthia A., Pittsburgh, Pa.
Clack, James L., Scranton, Pa.
Clark, Dorothea, Fulton, Mo.
Clark, Dorothy, Flint, Mich.
Clark, Edwina, Sulphur, Okla.
Clark, Harriett A., St. Augustine, Fla.
Clark, Joyce M., Berkeley, Calif.
Clark, Kenneth E., Olathe, Kans.
Clark, Lynn M., Rochester, N.Y.
Clark, Mary A., Knoxville, Tenn.
Clark, Mary B., Staunton, Va.
Clark, Mary J., Geneseo, N.Y.
Clark, Terrell A., Boston, Mass.
Clark, Thomas B., St. Augustine, Fla.
Clarke, David A., Corvallis, Oreg.
Cleary, Daniel A., Tucson, Ariz.
Cleary, Florence, Lake Ronkonkoma, N.Y.
Cleary, Mary T., Mill Neck, N.Y.
Clemens, Kenneth, L., Berkeley, Calif.
Clement, Annette M., Los Angeles, Calif.
Clement, Honor, Winnipeg, Manitoba, Canada
Clement, Susan L., Staunton, Va.
Clements, Edward E., Jacksonville, Ill.
Clements, Fay M., Austin, Tex.
Clements, Julianne W., Jacksonville, Ill.
Clouser, Richard A., University Park, Pa.
Clugston, Judith A., Dallas, Tex.
Clyne, Belinda K., Dallas, Tex.
Cobb, Margaret A., Dallas, Tex.
Cobb, Regina, Knoxville, Tenn.
Cody, Janet G., Danville, Ky.
Coffey, William F., Danville, Ky.
Cohl, Rona S., Sacramento, Calif.
Cohn, Paula B., Lombard, Ill.
Cohen, Tara, New York, N.Y.
Cokely, Dennis R., Washington, D.C.
Colasuonno, Thomas F., Westminster, Md.
Colburn, Celeste J., Greeley, Colo.
Colburn, Moran O., Talladega, Ala.
Cole, Darrell, Sulphur, Okla.
Cole, Frances, Talladega, Ala.
Cole, Susan, Newberry, S.C.
Coleman, Joyce R., Knoxville, Tenn.
Coley, Joan E., Philadelphia, Pa.
Colin, Susanne M., Denton, Tex.
Coll, Mary B., Olathe, Kans.
Collier, Billie M., Olathe, Kans.
Collier, Margaret K., Jackson, Miss.
Collins, George W., Omaha, Nebr.
Collins, James, Columbus, Ohio
Collins, Sr. Jeanne, Randolph, Mass.
Collins, Noreen T., Mill Neck, N.Y.
Colton, Sandra L., W. Hartford, Conn.
Combee, Ladre, Cave Spring, Ga.
Combs, Wilma C., St. Augustine, Fla.
Comeforo, Jean E., Pittsburgh, Pa.
Comin, Constance J., Pottsville, Pa.
Compton, Patricia T., Portland, Oreg.
Condon, Helene R., W. Trenton, N.J.
Conklin, Cara, Faribault, Minn.
Conley, Janet E., Baltimore, Md.
Conlon, Sheila A., W. Hartford, Conn.
Conner, Sarah R., Washington, D.C.
Connolly, Thomas A., Rochester, N.Y.
Connor, Marcella S., Omaha, Nebr.
Connors, Sr. Phyllis, Buffalo, N.Y.
Conte, Cheryle, White Plains, N.Y.
Conway, Sr. Anne, Randolph, Mass.
Conway, Jeanne W., Washington, D.C.
Conyers, Ann, Wilson, N.C.
Coogan, Margaret, New York, N.Y.
Cook, Laura M., St. Augustine, Fla.
Cook, Wyatt G., Mountain Lakes, N.J.
Cooke, Katherine, Richardson, Tex.
Cooledge, Laura, Dallas, Tex.
Cooney, James F., Providence, R.I.
Cooper, Wendy T., White Plains, N.Y.

Copeland, Carolyn, Pittsburgh, Pa.
Copeland, Daniel R., Rochester, N.Y.
Copperud, Demaris J., Berkeley, Calif.
Copple, Maris B., Seattle, Wash.
Corbett, Jr., Edward E., Frederick, Md.
Corbett, Marcia M., Frederick, Md.
Cordano, Waldo T., Delavan, Wis.
Corder, Louise K., Jacksonville, Ill.
Coretti, Marie, Portland, Maine
Corey, Daniel R., Upper Montclair, N.J.
Corfield, Joan, Santa Ana, Calif.
Corliss, Sr. M. Teresita, Randolph, Mass.
Corliss, Pauline D., Alhambra, Calif.
Corpening, Nancy, Columbia, Tenn.
Corrao, Jo Ann M., Milwaukee, Wis.
Corson, Harvey J., Danville, Ky.
Cortez, Cathleen J., Bronx, N.Y.
Costello, David, Dixon, Ill.
Costello, Sr. Frances, Brooklyn, N.Y.
Costello, Sr. Maura T., Lake Ronkonkoma, N.Y.
Coupland, Howard, Berkeley, Calif.
Courtois, Barbara O., Lawndale, Calif.
Couthen, Albert J., W. Hartford, Conn.
Cowan, Geraldine A., Los Angeles, Calif.
Cox, David B., St. Augustine, Fla.
Cox, Diane, Fairport, N.Y.
Cox, John T., St. Augustine, Fla.
Cox, Margaret L., Danville, Ky.
Coyle, Ann C., Pittsburgh, Pa.
Coyle, Patrick G., Rochester, N.Y.
Cozens, Anne, Hickory, N.C.
Craig, Derek F., Pittsburgh, Pa.
Craig, E. Virginia, Lansdale, Pa.
Craig, Helen B., Pittsburgh, Pa.
Craig, Jan. L., Omaha, Nebr.
Craig, William N., Pittsburgh, Pa.
Crammatte, Alan B., Washington, D.C.
Crandell, Kathleen E., Rochester, N.Y.
Crane, Norman W., White Plains, N.Y.
Craven, Mary K., Sioux City, Iowa
Crawford, Gladys H., Tallahassee, Fla.
Crawford, Jimmie R., Morganton, N.C.
Cree, Linda C., Denton, Tex.
Crews, Nancy F., Olathe, Kans.
Cribbin, Rev. Thomas F., Brooklyn, N.Y.
Crichlow, Hazel, St. Augustine, Fla.
Crittenden, Jerry B., Tampa, Fla.
Croft, Elizabeth P., Staunton, Va.
Cronin, Frances L., Bronx, N.Y.
Cronlund, Philip E., West Hartford, Conn.
Crook, Jimmie L., Dallas, Tex.
Crookham, Ramona L., Council Bluffs, Iowa
Cross, Sue A., Placentia, Calif.
Crosswhite, Earl D., Little Rock, Ark.
Crouse, Rebecca, Dolton, Ill.
Crow, Arthur D., Little Rock, Ark.
Crowell, Betty, Houston, Tex.
Crump, Claudia L., Dallas, Tex.
Crutchfield, Jr., Paul B., St. Augustine, Fla.
Culatta, Shelby F., Pittsbugh, Pa.
Culberson, Mildred F., St. Pauls, N.C.
Cullen, Frances B., Randolph, Mass.
Culton, Paul M., Huntington Beach, Calif.
Culverhouse, Patricia, Fulton, Mo.
Cummins, Laurie N., Missoula, Mont.
Cunningham, A. Dean, Austin, Tex.
Cunningham, Carol J., Austin, Tex.
Cunningham, Dorine N., Richardson, Tex.
Curchin, C. R. Ames, Rochester, N.Y.
Curlee, Pamela A., Denver, Colo.
Curran, Sr. Margaret, Randolph, Mass.
Curry, Patience R., Pittsburgh, Pa.
Curry, Roy L., New Orleans, La.
Curry, Sadie M., Hampton, Va.
Curtin, Sr. Loyola Marie, Rockville Centre, N.Y.
Curtis, Robert R., Little Rock, Ark.
Curtis, Shirley R., Rochester, N.Y.
Cussen, Anne M., Concord, Mass.
Custar, Judith K., Jacksonville, Ill.
Custer, David D., St. Paul, Minn.
Cutler, Ms. Jamie S., Danville, Ky.
Cuyler, Corliss Y., Newark, N.J.
Czernicki, Edward E., Romney, W. Va.
Czernicki, Norma F., Romney, W. Va.

D

D'Agostino, Louise T., Newark, N.J.
Daigle, Lanny, Baton Rouge, La.
Dain, Janet, Rome, N.Y.
Danchetz, Dorothy T., Cumming, Ga.
Daniels, Beatrice R., Chattanooga, Tenn.
Danuser, Susan, Fulton, Mo.
Danzig, Renee B., White Plains, N.Y.
Darby, Albert W., W. Hartford, Conn.
Darnell, William T., Washington, D.C.
Darr, Diana D., Colorado Springs, Colo.
Darter, David T., Burleson, Tex.
D'Audney, Weslee W., Omaha, Nebr.
Daughtery, Thomas, Lake Ronkonkoma, N.Y.
Daugherty-D'Arco, Martha A., White Plains, N.Y.
Daulton, Dorothy A., Columbus, Ohio
Dauscher, Donna M., Mill Neck, N.Y.
Davee, Veralyn T., Pontiac, Mich.
Davenport, Cheryl A., Washington, D.C.
Davidoff, Susan H., Silver Spring, Md.
Davidsen, Anita C., Jackson Heights, N.Y.
Davidson, E. Lynn, Riverside, Calif.
Davies, Judith N., Willingboro, N.J.
Davies, Lois, Pittsburgh, Pa.
Davila, Robert R., Washington, D.C.
Davis, Alice-Jean, Simi Valley, Calif.
Davis, Bilye Jo, Dallas, Tex.
Davis, Bob A., Cave Spring, Ga.
Davis, Charles W., Great Falls, Mont.
Davis, Clarence, Fulton, Mo.
Davis, Dorothy, Portland, Me.
Davis, Dorothy B., Seattle, Wash.
Davis, Helen, Fulton, Mo.
Davis, Jean, Fulton, Mo.

Davis, Linda J., Council Bluffs, Iowa
Davis, MaryLee, Langhorne, Pa.
Davis, Nancy C., Pittsburgh, Pa.
Davis, Richard, Fulton, Mo.
Davis, Robert D. Austin, Tex.
Davis, Robinson, Fulton, Mo.
Davis, Roger, Fulton, Mo.
Davis, Ruth P., Philadelphia, Pa.
Davis, Sandra L., St. Augustine, Fla.
Davis, Vernon W., Rochester, N.Y.
Davis, Walter S., St. Augustine, Fla.
Davis, William E., Knoxville, Tenn.
Davis, Wilma, Cave Spring, Ga.
Dawson, Elizabeth S., Wilson, N.C.
Dawson, Jeanette M., Galveston, Tex.
Dawson, Robert T., Colorado Springs, Colo.
Day, Barbara J., Lincoln, Nebr.
Day, Charles A., Frederick, Md.
Day, Harvey D., Sunnyvale, Calif.
Dean, Charlene M., Berkeley, Calif.
Deardorff, Adelia, Dallas, Tex.
DeBold, Joanne P., Rochester, N.Y.
DeCecco, Erna E., Indianapolis, Ind.
Decker, Gregory L., Riverside, Calif.
Dedon, Connie B., Harvey, Ill.
Deering, Linda K., Austin, Tex.
Degler, John M., Philadelphia, Pa.
DeGrood, Philip W., Santa Ana, Calif.
Deily, Ann B., Troy, N.Y.
Deist, Marlene H., Moorhead, Minn.
DeIuliis, Rita A., Pittsburgh, Pa.
Delaney, Sr. Anne B., Brooklyn, N.Y.
DeLaney, Sr. Mary, Buffalo, N.Y.
Delgado, Gilbert L., Washington, D.C.
Delgado, Rita A., White Plains, N.Y.
DeLaughter, Betty L., St. Augustine, Fla.
Delich, Anne S., Alhambra, Calif.
DeLuca, Marianne, Berkeley, Calif.
DeLyser, Ann S., Rochester, N.Y.
Dement, Nyna S., Faribault, Minn.
Demeza, Joseph, Bellevue, Ontario, Canada
Deming, Robert J., Great Falls, Mont.
Demitrieus, Lynn T., White Plains, N.Y.
Dengler, Joseph, Rochester, N.Y.
Denham, Aldene, San Jose, Calif.
Deninger, Michael L., Washington, D.C.
Denis, Taras B., White Plains, N.Y.
Dennis, Zona G., Manhattan, Kans.
Denno, Bruce W., Bloomfield Hills, Mich.
Denson, Ann M., St. Augustine, Fla.
Deppong, Marjorie J., Corunna, Mich.
DeSalle, Jean M., El Paso, Tex.
Desmarais, Marjorie, Talladega, Ala.
Deuel, Harold C., Morganton, N.C.
Deuel, John R., Romney, W. Va.
Deuel, Patricia A., Morganton, N.C.
Dever, Jane F., Talladega, Ala.
Devereaux, Robert W., Vancouver, Wash.
Deville, Gayle A., Danville, Ky.
Deville, John L., Danville, Ky.
Devine, Norman, Council Bluffs, Iowa
DeVinney, Charles F., Vancouver, Wash.
DeVito, Rocco J., Staunton, Va.
DeVoldre, Patricia M., Rochester, N.Y.
DeVoss, Margaret N., Normal, Ill.
Dewart, Ann deD., Pride's Crossing, Mass.
Deyarmin, Sharon L., Doylestown, Pa.
Diacon, Frances, Sulphur, Okla.
Diamant, Jay J., Washington, D.C.
Diarmit, Loretta P., Salem, Oreg.
Dick, Barbara J., New York, N.Y.
Dicker, Eva B., Milwaukee, Wis.
Dickinson, Mildred S., Olathe, Kans.
Dickson, Alice E., Pittsburgh, Pa.
Dickson, Joan M., Rochester, N.Y.
DeCola, MaryAnn C., Danville, Ky.
Dierksen, Carol, Faribault, Minn.
Dietrich, Marilyn A., Dolton, Ill.
Dignan, Arthur S., St. Augustine, Fla.
Dill, Alison M., Sioux City, Iowa
Dillingham, Felicia P., Cave Spring, Ga.
Dillingham, Mary C., Morganton, N.C.
Dillon, Janet L., Sharon, Pa.
Dillon, Thomas J., Santa Fe., N. Mex.
Di Martino, Rafaella, Newark, N.J.
Dinger, Kathy, Olathe, Kans.
Diot, Virginia E., Vancouver, Wash.
DiPietro, Loraine J., Washington, D.C.
Dirst, Richard D., Clarkston, Ga.
DiSanto, James V., Pittsburgh, Pa.
DiSomma, Elizabeth V., White Plains, N.Y.
Dispenza, Herlena, Baton Rouge, La.
Dixon, Judith, Rochester, N.Y.
Dixon, Linda K., Jacksonville, Ill.
Dixon, Marguerite C., Pittsburgh, Pa.
Dixon, Richard F., Greensboro, N.C.
Dixon, Sally J., Morganton, N.C.
Doane, Glenna N., Kissimmee, Fla.
Dobecki, Janet S., Columbus, Ohio
Dobbis, Sara R., New York, N.Y.
Doefler, Birean, Greensboro, N.C.
Doheny, Dolores B., New York, N.Y.
Domingue, Rita L., St. Augustine, Fla.
Donaldson, Caroline F., Riverside, Calif.
Donaldson, Rita J., Denton, Tex.
Donelson, Ruth Ann, Flint, Mich.
Donnelly, Sharon, York, Pa.
Donoghue, Robert J., Chicago, Ill.
Donohoe, Sr. Ann M., Randolph, Mass.
Donovan, Geraldine L., Ebensburg, Pa.
Dore, Anne G., Baton Rouge, La.
Dorish, Barbara Jo, Newark, Del.
Dorrance, Patricia K., Simi Valley, Calif.
Dorsey, Cecelia, Jackson, Miss.
Dorsey, Jr., Eugene, Jackson, Miss.
Doster, Brenda D., Detroit, Mich.
Doster, Grady C., Clarkston, Ga.
Doud, Joan M., Scranton, Pa.
Dougherty, Rosalie G., Rochester, N.Y.
Douglas, Albert, Austin, Tex.

Douglas, Candy, Santa Fe, N. Mex.
Douglas, Josie W., Knightdale, N.C.
Dovey, Mildred L., Pittsburgh, Pa.
Dowling, Barbara, Sioux Falls, S. Dak.
Dowling, Cheryl, Omaha, Nebr.
Dowling, Michael V., Buffalo, N.Y.
Dowling, Patrick J., Spartanburg, S.C.
Downey, Dennis, Buffalo, N.Y.
Drake, Dennis, Council Bluffs, Iowa
Drake, Donna F., St. Augustine, Fla.
Draper, Nadine M., Honolulu, Hawaii
Dreger, Dorothy S., Santa Ana, Calif.
Dreler, Susan, Greenville, S.C.
Driscoll, Inez H., Houston, Tex.
Drum, Markel K., Jackson, Tenn.
Drummond, Martha E., Springfield, Mass.
Dubber, Shiriey, Washington, D.C.
DuBois, Jan H., Martinsburg W. Va.
DuBose, Marcia R., Skokie, Ill.
Duck, Christopher M., Columbia, Md.
DuCote, Marilyn, Westminster, Md.
Dudley, Patricia L., Taccoa, Ga.
Duff, Judith A., Upper Marlboro, Md.
Duffin, Elizabeth E., Denton, Tex.
Duffy, Jenny M., Tacoma, Wash.
DuFine, Laurie J., New York, N.Y.
DuFresne, Catherine L., St. Augustine, Fla.
Duggan, Sr. Bernadette, Randolph, Mass.
Duick, Charles D., Delavan, Wis.
Dukes, Edythe F., Knoxville, Tenn.
Dunne, Mary, Gooding, Idaho
Dunnell, Nancy S., St. Augustine, Fla.
Dunstall, Carol G., Miami Springs, Fla.
Dupre, Karen, Philadelphia, Pa.
Durfee, Constance E., Rochester, N.Y.
Durham, Katherine M., Danville, Ky.
Durham, Mary C., Spartanburg, S.C.
Durham, Sibbie, Danville, Ky.
Dutra, Karen, Stanilaus, Calif.
Dutton, C. Houston, Talladega, Ala.
Duve, Gene R., Northridge, Calif.
Dwyer, Elizabeth, Santa Fe, N. Mex.
Dwyer, Marynell, Philadelphia, Pa.
Dwyer, Rev. Robert D., Rome, N.Y.
Dyer, Kathryn I., Romney, W. Va.
Dykes, Earlene J., Tucson, Ariz.
Dykman, Carl J., San Antonio, Tex.
Dziurzynski, Stanley, Knoxville, Tenn.
Dzurick, Russell, Fulton, Mo.
Dzurick, Sarah, Fulton, Mo.

E

Eads, Frances B., Little Rock, Ark.
Early, George H., Terre Haute, Ind.
Eason, Luella S., Englewood, Colo.
East, William T., Talladega, Ala.
Eastman, Gilbert C., Washington, D.C.
Eatmon, Clara E., Wilson, N.C.
Eaton, Margaret J., Riverside, Calif.
Eccarius, Malinda A., Cedar Rapids, Iowa
Eccher, Anne L., Rochester, N.Y.
Eckstein William F., Little Rock, Ark.
Edelberg, Ann R., Rome, N.Y.
Edelstein, Terry A., Pittsburgh, Pa.
Eder, Martha R., Rochester, N.Y.
Edge, Katherine A., Honolula, Hawaii
Edmonds, Patricia, Evanston, Ill.
Edwards, Davis, Danville, Ky.
Edwards, Eleanor M., Bloomfield, Conn.
Edwards, Fern L., Washington, D.C.
Edwards, Rayonette T., Philadelphia, Pa.
Edwards, Robert, Santa Fe, N. Mex.
Edwards, Ruth J., Delavan, Wis.
Egbert, A. Marie, Spokane, Wash.
Egbert, William S., Brooklyn, N.Y.
Egelston, Judy C., Rochester, N.Y.
Egger, Deborah T., Phoenix Ariz.
Ehrlich, Susan, Portsmouth, Va.
Ehrman, Jeanette G., Pittsburgh, Pa.
Eisen, Carol S., Tucson, Ariz.
Eisenberg, Roslyn, Santa Fe, N. Mex.
Eikins, Gertrude S., Morganton, N.C.
Ellenberger, Ruth L., Minneapolis, Minn.
Ellerbeck, Marian L., Kearney, Nebr.
Elliott, Deborah F., Corbin City, N.J.
Elliott, Judy, Sulphur, Okla.
Elliott, Neilius L., Riverside, Calif.
Elliott, W. W., Talladega, Ala.
Ellis, Charles A., Sioux Falls, S. Dak.
Ellsworth, Darrell D., Webster Groves, Mo.
Elstad, Mary C., Colorado Springs, Colo.
Elwell, Beverly L., St. Augustine, Fla.
Embree, Judith E., Buffalo, N.Y.
Embry, Joan, St. Augustine, Fla.
Emerick, Aletha G., Riverside, Calif.
Emerson, Gail H., Rochester, N.Y.
Engle, Janet A., Alsey, Ill.
English, Millard, Charleston, S.C.
Ennis, John M., Washington, D.C.
Enola, John I., Brattleboro, Vt.
Epps, Margaret G., Hampton, Va.
Epstein, Gerald, Covina, Calif.
Epstein, Jacqueline F., Levittown, Pa.
Erb, Linda J., San Diego, Calif.
Erickson, Barbara, Sioux Falls, S. Dak.
Erickson, Delbert, Sioux Falls, S. Dak.
Erickson, Genevra G., Salem, Oreg.
Erickson, Susan E., Lincoln, Nebr.
Erickson, William M., Salem, Oreg.
Erikson, Ellen B., Washington, D.C.
Erlandson, Delores, Tucson, Ariz.
Ertel, Carol, Buffalo, N.Y.
Erting, Carol J., Washington, D.C.
Ervin, Jean C., Charlottesville, Va.
Esterline, Albert C., Faribault, Minn.
Esterline, Lucille, Faribault, Minn.
Estes, Charles C., Talladega, Ala.
Ethridge, Mildred C., Pittsburgh, Pa.
Eustace, Doris M., Rochester, N.Y.
Evans, Mrs. Chris H., Rochester, N.Y.
Evans, Elva E., Wilson, N.C.
Evans, Sr. Francine, Buffalo, N.Y.

Evans, Judith F., White Plains, N.Y.
Evans, Peck, Danville, Ky.
Evans, Sue B., Danville, Ky.
Evelsizer, Ronald L., University, Ala.
Everhart, Bonnie G., Palatine, Ill.

F

Fadden, Mary Jo
Fagan, Ernestine H., Colorado Springs, Colo.
Fahey, C. Joan, Riverside, Calif.
Fahlbusch, Nadine N., Riverside, Calif.
Faist, Lois, Lawndale, Calif.
Fallon, Denis P., Colorado Springs, Colo.
Fankhauser, Nancy J., Seattle, Wash.
Fant, Christine C., Austin, Tex.
Fant, Jr., Louie J., Northridge, Calif.
Farish, Luanne G., North Charleston, S.C.
Farman, J. Jay, Rome, N.Y.
Farman, Sr. Rose Anne, Buffalo, N.Y.
Farmer, Betty M., Moline, Ill.
Farmer, Brenda C., Raleigh, N.C.
Farmer, Gary W., Raleigh, N.C.
Farmer, Mary F., Houston, Tex.
Farney, Brenda S., Olathe, Kans.
Farrell, Rhonda L., Rochester, N.Y.
Farris, Earl P., Romney, W. Va.
Fauth, Warren W., Riverside, Calif.
Feder, Fern B., Lombard, Ill.
Feder, Glenda, Mesquite, Tex.
Federlin, Tom M., Manhasset, N.Y.
Feher, Terri, Pittsburgh, Pa.
Fehsenfeld, Robert H., White Plains, N.Y.
Feit, Rachel H., Washington, D.C.
Feller, Sr., Edward C., Jacksonville, Ill.
Feller, Patricia J., Jacksonville, Ill.
Fendrich, Richard, Tucson, Ariz.
Fenton, Marion D., Windsor, Conn.
Ferguson, Jeannie, Fort Worth, Tex.
Ferguson, Judi A., Dallas, Tex.
Ferguson, Sandra, Raleigh, N.C.
Fernandes, Elizabeth J., Seattle, Wash.
Fernandez-Low, Anita, San Diego, Calif.
Ferraro, Linda C., West Trenton, N.J.
Ferris, Margaret H., Neenah, Wis.
Fertig, Nelson C., Riverside, Calif.
Fertig, Ralph E., Riverside, Calif.
Fest, Paul E., Vancouver, Wash.
Feulner, Sr. Joanne, Brooklyn, N.Y.
Fey, Patricia A., Camillus, N.Y.
Fialkowski, June D., Clifton, N.J.
Field, Cornelia C., Omaha, Nebr.
Field, Jean D'O., White Plains, N.Y.
Fielding, Beverly A., Indianapolis, Ind.
Fields, Rochelle, Washington, D.C.
File, Hazel R., Jacksonville, Ill.
Finch, George L., Austin, Tex.
Finch, Jerrie H., Little Rock, Ark.
Finke, Arlen D., Danville, Ky.
Finley, Sr. Margaret M., Brooklyn, N.Y.
Finn, Sr. Joan Mary, Rockville Centre, N.Y.
Finnegan, Jr., Joseph P., St. Augustine, Fla.
Finnerty, Patricia A., Mill Neck, N.Y.
Firestone, Bob E., Columbia, Md.
Fischer, David, Dayton, Ohio
Fischer, Margaret, Buffalo, N.Y.
Fischle, Bonnie-Jeanne, St. Augustine, Fla.
Fisher, Theresa L., Greeley, Colo.
Fishler, Thomas G., Riverside, Calif.
Fitch, James L., Hattiesburg, Miss.
Fitz-Gerald, Della R., Washington, D.C.
Fitzgerald, Kelly, Baton Rouge, La.
Fitzgibbon, Sr. Catherine, Lake Ronkonkoma, N.Y.
Flanagan, Diane, Baton Rouge, La.
Flashman, Ellen M., Jacksonville, Ill.
Flathouse, Virgil E., Austin, Tex.
Flatt, William D., Melrose Park, Ill.
Fleischer, Lawrence, Northridge, Calif.
Fleming, D. Ann, Raleigh, N.C.
Fleming, Jr., Robert G., Morganton, N.C.
Fletcher, Dexter, San Diego, Calif.
Flinn, Susan, W. Hartford, Conn.
Flint, Dorothy, Beverly, Mass.
Flint, Richard W., Beverly, Mass.
Flood, Sr. Cecelia, Lake Ronkonkoma, N.Y.
Flood, James T., Columbus, Ohio
Flores, Patricia D., Dallas, Tex.
Flower, Barbara H., Knoxville, Tenn.
Flower, Warren A., Knoxville, Tenn.
Flowers, Karen M., Seattle, Wash.
Foersterling, Carole, Jacksonville, Ill.
Fogarty, Roslyn M., Scranton, Pa.
Fogg, Pamela, Portland, Maine
Foley, Merle J., Frederick, Md.
Fontana, David A., Riverside, Calif.
Fonville, Wilson E., Colorado Springs, Colo.
Forbes, Diane, Houston, Tex.
Forbes, Mary B., Jacksonville, Ill.
Ford, Elizabeth, Berkeley, Calif.
Ford, Eugenia C., Jackson, Miss.
Ford, Myra B., Morganton, N.C.
Fore, Patricia, Sulphur, Okla.
Foreman, W. Jack, Tulsa, Okla.
Forestal, Lawrence H., Chicago, Ill.
Fortin, Pat, Omaha, Nebr.
Foshay, Barbara H., Milton, Mass.
Foss, Mary J., Sioux Falls, S. Dak.
Foster, Elizabeth, Indianapolis, Ind.
Foster, Sharon, Omaha, Nebr.
Foster, Jane E. Mansfield, Ohio
Fowler, Robert L., Vancouver, Wash.
Fox, Virginia M., Charlottesville, Va.
Foy, Lenola M., New York, N.Y.
Frakes, Glenn, Colorado Springs, Colo.
Frame, Jacqueline, Fulton, Mo.
Francis, Patricia I., Mystic, Conn.
Frank, Diane L., Pittsburgh, Pa.
Frank, Emily, Houston, Tex.
Franks, J. Richard, Pullman, Wash.

Franks, J. Rodney, Raleigh, N.C.
Fredericks, Raymond K., Jacksonville, Ill.
Freeland, Deborah J., Knoxville, Tenn.
Freeman, Helen B., Danville, Ky.
Freeman, Jerome W., Danville, Ky.
French, Tyresia P., Wilson, N.C.
Freund, Dorothy, Faribault, Minn.
Frick, Alice B., Staunton, Va.
Frick, W. Wayne, Staunton, Va.
Frisch, Frances M., Jacksonville, Ill.
Frisina, D. Robert, Rochester, N.Y.
Frye, Rubye S., Washington, D.C.
Fuehrer, Janice L., Indianapolis, Ind.
Fujiyama, Carol F., Alhambra, Calif.
Fuller, Michal J., Albuquerque, N. Mex.
Fuller, Ren S., Romney, W. Va.
Fuller, Virginia, Little Rock, Ark.
Fullerton, Gary D., Sulphur, Okla.
Fultz, Vae Rose, Jacksonville, Ill.
Funderburg, Ruth S., Honolulu, Hawaii
Funk, Harry E., Louisville, Ky.
Funk, Joanne R., Norfolk, Va.
Furey, Mary Z., Washington, D.C.

G

Gaerig, George P., Orchard Lake, Mich.
Gage, James L., Olathe, Kans.
Gage, Julia L., Olathe, Kans.
Gagnon, Jane C., Northridge, Calif.
Galey, Joe R., Storm Lake, Iowa
Gallimore, Ray H., St. Augustine, Fla.
Gallion, Donald R., Harrisburg, Pa.
Galloway, Gertrude S., Columbia, Md.
Galloway, Victor H., Washington, D.C.
Galvan, Betty S., Berkeley, Calif.
Galvan, John, Berkeley, Calif.
Gamble, Harold W., Fulton, Mo.
Gamble, Suzanne, Fulton, Mo.
Gammel, Charles L., Jackson, Miss.
Gancheff, Penny, Berkeley, Calif.
Gannon, Jack R., Washington, D.C.
Ganssle, Claireanne P., Summit, N.J.
Gant, Evelyn F., Delavan, Wis.
Gantz, Patricia B., Council Bluffs, Iowa
Gaor, Marcia T., New York, N.Y.
Garber, Garl E., Ypsilanti, Mich.
Gardell, Edythe, Santa Ana, Calif.
Garlitz, LaDonna F., Romney, W. Va.
Garner, J. Diane, Dallas, Tex.
Garner, Nola, Fulton, Mo.
Garretson, Mervin D., Washington, D.C.
Garrett, Brenda K., Talladega, Ala.
Garrett, Erpel L., Riverside, Calif.
Garrison, Jack, Sulphur, Okla.
Garrison, Karen R., Greeley, Colo.
Garrity, James H., Pittsburgh, Pa.
Garrity, Rosemary P., Pittsburgh, Pa.
Gartenberg, Susan, Brooklyn, N.Y.
Garton, Mary L., Olathe, Kans.
Gassman, Eileen R., Chicago, Ill.
Gastman, Carl, Berkeley, Calif.
Gatehouse, James T., Portland, Maine
Gatehouse, Lois, Portland, Maine
Gates, Iolla V., Riverside, Calif.
Gatlin, Theda, Little Rock, Ark.
Gauger, Jaclyn S., Rochester, N.Y.
Gaul, Christine M., Gardena, Calif.
Gay, Mildred, Sulphur, Okla.
Gaylord, Iola C., Morganton, N.C.
Gays, Richard F., Newark, Del.
Gee, Mary A., Abilene, Tex.
Gehres, Bina J., Providence, R.I.
Geiger, Connie L., Colorado Springs, Colo.
Geisser, Maura J., Cranston, R.I.
Geidart, Kathern B., Frederick, Md.
Gellner, Robert F., Rochester, N.Y.
Genetti, Anne M., Kalamazoo, Mich.
Genrich, Randall E., Minneapolis, Minn.
Gentile, Linda A., Dallas, Tex.
George, Richard A., Berkeley, Calif.
Geppert, Karan, New Caney, Tex.
Germany, Jeremiah, Berkeley, Calif.
Gerson, Barbara, Sequin, Wash.
Giangreco, C. Joseph, Council Bluffs, Iowa
Giannotti, Sherrie L., Honolulu, Hawaii
Gibson, Joan M., Buffalo, N.Y.
Gibson, Joy, Cave Spring, Ga.
Gibson, Mary B., Danville, Ky.
Gibson, William S., Danville, Ky.
Gilbert, Elizabeth O., Staunton, Va.
Gilbert, Mary S., Clarkston, Ga.
Giles, Catherine S., Talladega, Ala.
Gilkey, Patricia A., Little Rock, Ark.
Gill, Barbara K., Gambrills, Md.
Gill, Janine L., Westminster, Md.
Gillan, Earlene D., Newark, Del.
Gillespie, Margaret P., Tucson, Ariz.
Gillhouse, Janet, Moline, Ill.
Gilliam, Judith M., Talladega, Ala.
Gilmore, Charles A., Washington, D.C.
Glancy, Leonard E., Indianapolis, Ind.
Gleason, Ann R., Cedar Rapids, Iowa
Gleason, Barbara J. W., Charlottesville, Va.
Gleason, Catherine, Tulsa, Okla.
Glenn, Charles, Cave Spring, Ga.
Gobble, Edward M., St. Augustine, Fla.
Godfrey, Ruth W., Jacksonville, Ill.
Godsave, Bruce, Providence, R.I.
Goeres, Loren, Fulton, Mo.
Goetter, Marie, Omaha, Nebr.
Goetzinger, Cornelius, Olathe, Kans.
Goetzinger, Madelon R., Kansas City, Mo.
Goetzinger, Rita B., Olathe, Kans.
Goff, Elma E., Colorado Springs, Colo.
Goforth, Naomi L., Salem, Oreg.
Goins, Sue J., Greensboro, N.C.
Goldberg, J. Philip, Washington, D.C.
Golden, Emanuel, Baltimore, Md.
Goldfarb, Mark L., Washington, D.C.
Goldfeder, James K., Knoxville, Tenn.
Goldman, Linda W., Mission Viejo, Calif.
Goldman, Warren R., Rochester, N.Y.
Goldwasser, Pamela R., Pittsburgh, Pa.
Golladay, Loy E., Rochester, N.Y.
Gonzales, B. Robert, Jacksonville, Fla.

Gonzales, Ricardo D., Riverside, Calif.
Good, Viki, Fresno, Calif.
Goode, Nelda H., Dallas, Tex.
Goodman, Danna H., Jackson, Miss.
Goodman, Gail J., Los Angeles, Calif.
Goodstein, Harvey, Washington, D.C.
Gordon, Cheryl L., Alhambra, Calif.
Gordon, Marion, Fulton, Mo.
Gordon, Nancy H., Staunton, Va.
Gormley, Helen M., Watertown, Mass.
Gosserand, Marie, Baton Rouge, La.
Gottlieb, Iris C., Normal, Ill.
Gouby, Fred L., Tucson, Ariz.
Gowan, Yvonne, Sulphur, Okla.
Gower, Nancy N., Danville, Ky.
Gowing, Elizabeth M., Lanham, Md.
Gradnauer, Thomas, W. Trenton, N.J.
Graham, Carol M., Danville, Ky.
Graham, Jacqueline B., Staunton, Va.
Graham, Richard O., Tulare, Calif.
Graham, Robert E., Auburn, Ala.
Grammatico, Leahea F., Redwood City, Calif.
Grant, Dorothy E., Ypsilanti, Mich.
Grant, June M., San Antonio, Tex.
Grant, William D., Takoma Park, Md.
Gratton, Melissa D., Bloomsburg, Pa.
Gravelec, Judy, Morganton, N.C.
Graves, Mary L., Philadelphia, Pa.
Graves, Milton T., Pittsburgh, Pa.
Gray, Angela C., Baltimore, Md.
Gray, Helen J., Farmington, Mich.
Gray, James A., Fulton, Mo.
Gray, Lisa, St. Augustine, Fla.
Graybill, Joanne C., Brownwood, Tex.
Greathouse, Joni, Santa Ana, Calif.
Greco, Rosalie, Milwaukee, Wis.
Green, Steven G., Sioux City, Iowa
Green, Sylvania M., Spartanburg, S.C.
Green, Walter B., Ithaca, N.Y.
Greenberg, Bernard L., Washington, D.C.
Greene, Sandra M., Casper, Wyo.
Greenmum, Rosalind R., St. Augustine, Fla.
Greever, Gaynelle B., Staunton, Va.
Griffin, G. Barbara, Buffalo, N.Y.
Griffing, Barry, Sacramento, Calif.
Griffith, Edra, Olathe, Kans.
Griffiths, Karen R., Seattle, Wash.
Grimley, Judith, Baton Rouge, La.
Grimm, Judith A., Cambridge, Minn.
Grizzard, Lois W., Cave Spring, Ga.
Grosman, Kate E., Westminster, Md.
Gross, Debbie G., Tucson, Ariz.
Gross, Myra, Silver Spring, Md.
Groth, Jr., John W., Cave Spring, Ga.
Groves, Ian D., San Jose, Calif.
Grubbs, Deenie A., Jackson, Miss.
Gruenhagen, Merlen G., Columbus, Ohio
Gruss, Betty, Faribault, Minn.
Guagliardo, Rita A., Rockville, Md.
Guenther, Nina, Little Rock, Ark.
Guffey, Ernest E., Staunton, Va.
Guido, Eleanor, New York, N.Y.
Guilmett, Nancy M., Port Alberni, British Columbia, Canada
Guimond, Jacques L., Amherst, N.S., Canada
Gulbranson, Claude S., Greenfield, N.H.
Gulley, Carolyn L., Danville, Ky.
Gumtow, Sharon L., St. Augustine, Fla.
Gunderson, Rosella, Berkeley, Calif.
Gunter, Amelia G., Jackson, Miss.
Gustafson, Wayne A., Duluth, Minn.
Gustason, Gerilee, Washington, D.C.
Guthrie, Helen P., Lexington, Ky.
Gutteridge, Marianne, Seattle, Wash.
Guzek, Jean, Hancock, Mich.

H

Haas, Karen A. Gulfport, Miss.
Hack, Cheryl H., Trenton, N.J.
Hackett, Kathleen, Berkeley, Calif.
Hackney, Debbie J., Danville, Ky.
Hackney, Donald L., Danville, Ky.
Haecker, Ernest, Santa Fe, N. Mex.
Hagerty, Elizabeth A., Allentown, Pa.
Hahn, Elizabeth H., Berkeley, Calif.
Hailey, Calvin P., Morganton, N.C.
Haines, Margaret L., St. Augustine, Fla.
Haines, Margaret M., Romney, W. Va.
Haines, Rosemary J., Charlottesville, Va.
Haining, Velma J., Jackson, Miss.
Haislip, Shirley E., E. Tawas, Mich.
Hajna, Regina, Rome, N.Y.
Halasz, Elizabeth H., Arlington, Va.
Halberg, Caroline, W. Hartford, Conn.
Hall, Aileen B., Columbia, Md.
Hall, Charlotte, Knoxville, Tenn.
Hall, Harry L., Jacksonville, Ill.
Hall, Jonathan, Kensington, Md.
Hall, Kathleen A., Orchard Park, N.Y.
Hall, Sally, Portland, Me.
Hallmark, Ann R., Upper Marlboro, Md.
Hallock, Patricia S., Ogden, Utah
Hally, Mary M., Randolph, Mass.
Halstead, Sammie R., Washington, D.C.
Haltom, Mary H., Fort Worth, Tex.
Hamilton, John F., Danville, Ky.
Hamilton, Karen, Danville, Ky.
Hamilton, Sonya T., Little Rock, Ark.
Hammel, Diane E., Indianapolis, Ind.
Hammer, Sharon E., Vancouver, Wash.
Hammermeister, Freida K., Pittsburgh, Pa.
Hammermeister, Kersti, Pittsburgh, Pa.
Hammerstrom, Mary J., Omaha, Nebr.
Hammett, Rhonda Y., Spartanburg, S.C.
Hammond, B. William, Northridge, Calif.
Hampshire, Sharon S., Covina, Calif.
Hampton, Ida G., St. Augustine, Fla.
Hampton, Sherwood, St. Augustine, Fla.
Hanes, Gertrude E., Pittsburgh, Pa.
Haney, Mary R., White Plains, N.Y.
Hankins, Joseph A., Jacksonville, Ill.

Hanks, Richard T., Peoria, Ill.
Hanson, Dennis L., Rochester, N.Y.
Hanson, George, Fairbault, Minn.
Hanson, Linda, Portland, Me.
Hanson, Melissa M., Jacksonville, Ill.
Hanson, Robert D., Ogden, Utah
Harbottle, Patricia A., Scranton, Pa.
Harden, Elizabeth W., Roanoke, Va.
Hardie, Mary L., Fort Dodge, Iowa
Hardin, Kathleen H., Olathe, Kans.
Hardy, Vernell, Hampton, Va.
Hargis, Charles H., Knoxville, Tenn.
Hargreaves, Alfred F., Talladega, Ala.
Harker, Virginia J., Washington, D.C.
Harkins, Charles T., Mystic, Conn.
Harlan, Berry P., Romney, W. Va.
Harlan, Brian W., Delavan, Wis.
Harland, F. Gordon, Tucson, Ariz.
Harmless, Betty L., Phoenix, Ariz.
Harmon, Irene E., Buffalo, N.Y.
Harms, Virginia F., W. Trenton, N.J.
Harned, Sylvia M., Amarillo, Tex.
Harper, Jenna, Norman, Okla.
Harper, Karen M., Erie, Pa.
Harper, Phyllis M., Fort Madison, Iowa
Harper, William V., Vancouver, Wash.
Harris, Archie P., Danville, Ky.
Harris, Barbara D., Danville, Ky.
Harris, Betty M., Ventura, Calif.
Harris, Cheryl G., Houston, Tex.
Harris, Rachel, Washington, D.C.
Harris, Robert I., Rochester, N.Y.
Harris, Rosemary, Fulton, Mo.
Harris, Sarah L., Morganton, N.C.
Harrison, Anne E., Tucson, Ariz.
Harrison, Anne-Marie, Morganton, N.C.
Harrison, Barbara M., Dallas, Tex.
Harrison, C. Duane, Ogden, Utah
Harrison, Dema, Fulton, Mo.
Harrison, Lloyd A., Fulton, Mo.
Harrison, Sr. Mary M., Randolph, Mass.
Harrison, Yita, Phoenix, Ariz.
Harston, Kathlyn A., Houston, Tex.
Hart, Joanna S., Washington, D.C.
Hart, Verna, Pittsburgh, Pa.
Hartley, Jr., Harold V., Clarion, Pa.
Hartley, Minnie M., Jackson, Miss.
Hartnett, John F., Spartanburg, S.C.
Hartnett, Judith, Lombard, Ill.
Hartung, Joseph E., Atlanta, Ga.
Harvey, Martha L., Morganton, N.C.
Haslett, Marcia A., Jacksonville, Ill.
Hastings, Theodore B., Morganton, N.C.
Hatch, Pamela, Rochester, N.Y.
Haught, Dan R., Romney, W. Va.
Hauptman, Doris A., Newington, Conn.
Haus, David, Fulton, Mo.
Haus, Jill, Fulton, Mo.
Havis, Don, San Jose, Calif.
Hawbecker, Helen, Los Angeles, Calif.
Hayden, Eleanor, Baltimore, Md.
Haydis, Georgette K., Tucson, Ariz.
Hayek, Allen J., Devils Lake, N. Dak.
Hayes, Beth, Baton Rouge, La.
Hayes, Dorothy M., Madison, Wis.
Hayes, Gordon M., Sacramento, Calif.
Hayes, Ruth A., Seattle, Wash.
Haynes, Treva J., Washington, D.C.
Hayward, Linda R., W. Trenton, N.J.
Hazen, Walter, St. Augustine, Fla.
Head, Kimberly A., Seattle, Wash.
Heafner, Jane E., Morganton, N.C.
Hearn, Janet C., Danville, Ky.
Heaton, Kathy-Lynn, Riverside, Calif.
Heavner, David S., Morganton, N.C.
Hebert, Joan E., Lake Ronkonkoma, N.Y.
Heck, Martha E., Phoenix, Ariz.
Hedrick, Ora L., Sante Fe Springs, Calif.
Heffernan, Patricia K., Rochester, N.Y.
Hefferon, Margaret A., St. Augustine, Fla.
Heidinger, Virginia A., Washington, D.C.
Heistand, Hilary D., Charlottesville, Va.
Hellman, Deborah L., Tulsa, Okla.
Helphistine, Patricia P., Gurnee, Ill.
Helvig, Diane L., Tucson, Ariz.
Hemmings, Lynda J., Pittsburgh, Pa.
Henderson, Betty L., Morganton, N.C.
Henderson, John M., Columbia, Md.
Henderson, Rance, Morganton, N.C.
Hendren, Rosemarie, Oklahoma City, Okla.
Hendricks, Sr. Mary, Buffalo, N.Y.
Hendricks, Paula-Antoinette, Colorado Springs, Colo.
Hendrix, Dick, Sulphur, Okla.
Hendrix, Jackie, Newark, Del.
Hendrix, Rosa, Sulphur, Okla.
Henkels, Milo P, Adrian, Miss.
Hennessy, Anne E., Antrim, N.H.
Henry, Deborah M., St. Augustine, Fla.
Henry, Michael A., St. Augustine, Fla.
Henwood, Norman, Vancouver, Wash.
Herber, Susan D., Tacoma, Wash.
Herbst, Judith A., Delavan, Wis.
Herden, Elsie, Rochester, N.Y.
Herman, Richard, Omaha, Nebr.
Herman, Thomas O., Ogden, Utah
Hermsen, Dale, Brighton, Miss.
Hern, Joyce E., Hickory, N.C.
Herrick, Helen M., Philadelphia, Pa.
Herrick, Margaret M., East Dennis, Mass.
Herriott, Edith P., Romney, W. Va.
Herman, Elaine A., Pittsburgh, Pa.
Harrold, Mary D., Romney, W. Va.
Hersey, Barbara M., Berkeley, Calif.
Hertz, Donna L., Vancouver, Wash.
Herward, Pamela A., Pittsburgh, Pa.
Herx, Michelle A., Columbia, Md.
Herzog, Virginia R., Dallas, Tex.
Hesdorffer, Arlene G., Dallas, Tex.
Hess, D. Wilson, Rochester, N.Y.
Hester, James T., Danville, Ky.
Hesvik, Myrna, Sioux Falls, S. Dak.
Hetletved, Melissa J., Morganton, N.C.
Heuser, Dorothea, Lincoln, Nebr.
Hewett, Ruby M., Cave Spring, Ga.

Hewis, Andrew, Cleveland, Ohio
Hickey, Joan, Portland, Maine
Hicks, Audrey C., St. Louis, Mo.
Hicks, Bette D., Frederick, Md.
Hicks, Doin E., Washington, D.C.
Hicks, Tom J., Little Rock, Ark.
Heitt, Nita J., Tucson, Ariz.
Higginbotham, Travis L., Little Rock, Ark.
Higgins, Catherine B., Washington, D.C.
Higgins, Francis C., Washington, D.C.
Higgins, Leigh C., Deerfield, Ill.
Higgs, Joetta R., Muncie, Ind.
Highnote, Emmalee J., Cave Spring, Ga.
Highnote, Margaret T., Clarkston, Ga.
Hilke, Rosemary O., Vancouver, Wash.
Hill, Aline, Knoxville, Tenn.
Hill, Beulah E., Los Angeles, Calif.
Hill, Charles V., Morganton, N.C.
Hill, George M., Sulphur, Okla.
Hill, Jerry, Sulphur, Okla.
Hill, Juanita, Urbana, Ill.
Hill, Patsy L., Morganton, N.C.
Hill, Velda, Sulphur, Okla.
Hilton, Susan E., Newark, Del.
Hines, Rudolph C., Washington, D.C.
Hines, Walter E., Council Bluffs, Iowa
Hinkle, Candyce S., Little Rock, Ark.
Hinnant, Leslie J., Rochester, N.Y.
Hinsdale, Susan B., Charlotte, N.C.
Hippe, Flo E., Great Falls, Mont.
Hirasuna, Paulette, Fresno, Calif.
Hoag, Ralph L., Tucson, Ariz.
Hobart, Barbara J., Newark, Del.
Hobba, Hazel, Bakersfield, Calif.
Hodes, Robin J., Newark, N.J.
Hodges, Marlis S., Houston, Tex.
Hodges, Mary S., Northridge, Calif.
Hodgins, Dianne E., Milton, Ontario, Canada
Hodgson, Rev. Daniel A., Elmhurst, N.Y.
Hodnik, Joseph, Olathe, Kans.
Hodock, Irene H., Indianapolis, Ind.
Hoesly, Ellen A., Rochester, N.Y.
Hoff, Mary T., Clarkston, Ga.
Hoffman, Sondra S., Washington, D.C.
Hoffmeister, Alfred J., W. Hartford, Conn.
Hoffmeyer, Ben E., W. Hartford, Conn.
Hoffmeyer, Claude B., Danville, Ky.
Hoffmeyer, Vera B., W. Hartford, Conn.
Hogan, Patricia C., San Mateo, Calif.
Hogan, Pauline, Chickasha, Okla.
Hogue, Marjorie S., Abilene, Tex.
Holcomb, Loretta P., Rochester, N.Y.
Holcomb, Marjoriebell S., Newark, Del.
Holcomb, Roy K., Newark, Del.
Holcombe, Sue O., Talladega, Ala.
Holdt, Betty P., Monmouth, Oreg.
Hollamby, Harriet R., St. Augustine, Fla.
Holland, Kathryn M., Lawndale, Calif.
Holland, Michael A., Colorado Springs, Colo.
Holman, Gary L., Pittsburgh, Pa.
Holmes, David, Rome, N.Y.
Holmes, Mary A., Rome, N.Y.
Holste, Herman M., Bad Axe, Mich.
Holt, C. Jackson, Staunton, Va.
Holt, Margaret, Portland, Me.
Holt, Mary E., Gonzales, Tex.
Holt, Sally L., Dayton, Ohio
Homburg, Linda C., Frederick, Md.
Home, Susan B., Seattle, Wash.
Homfeld, Shirley, San Mateo, Calif.
Hood, Cathy L., Fort Lauderdale, Fla.
Hopkins, Beverly A., St. Charles, Ill.
Hopkins, Linda L., Lakewood, Colo.
Hopkins, Mary T., Orlando, Fla.
Horenstein, Marcy E., Los Angeles, Calif.
Horn, Charlotte M., Austin, Tex.
Horne, Myra H., Spartanburg, S.C.
Horner, Sr., Carla, Randolph, Mass.
Horschman, Linda M., Riverside, Calif.
Horstmann, Dorothy G., Middle Island, N.Y.
Horton, Janet G., Mobile, Ala.
Horvath, Joyce, White Plains, N.Y.
Horvath, Judit, White Plains, N.Y.
Horwitz, N. Rae, Frederick, Md.
Hosfelt, Sally K., Omaha, Nebr.
Hostin, Terry D., Danville, Ky.
Hotard, Patricia, Baton Rouge, La.
Hott, Cynthia L., Jacksonville, Ill.
Houchin, Elmo E., Little Rock, Ark.
Houchins, Rollie R., Kansas City, Mo.
Houck, Susan V., Morganton, N.C.
Houk, George A., Indianapolis, Ind.
Houk, Judith C., Indianapolis, Ind.
Hourihan, Rev. Msgr. John P., Newark, N.J.
Hourihan, Kathleen M., Newark, N.J.
Houser, Margaret S., Morganton, N.C.
Hoversten, Gloria H., Downey, Calif.
Hoveland, Nancy L., Pittsburgh, Pa.
Howard, Helen, Hudson Falls, N.Y.
Howard, Mistie G., Jacksonville, Ill.
Howarth, Elizabeth W., Vancouver, Wash.
Howell, Ruth F., Frederick, Md.
Hoxie, James A., Riverside, Calif.
Hoyle, Jr., George, Greeley, Colo.
Hoyle, Mary, Gooding, Idaho
Hranac, Kathleen, Omaha, Nebr.
Hritz, Ann S., Riverside, Calif.
Hubbard, Winifred, Olathe, Kans.
Hudson, Doris H., Tucson, Ariz.
Hudson, Jr., John W., Sioux Falls, S. Dak.
Hudson, Pansy L., Olathe, Kans.
Huffman, Beulah E., Morganton, N.C.
Hughes, Barbara T., Greensboro, N.C.
Hughes, Carolyn, Rochester, N.Y.
Hughes, Florene, Rochester, N.Y.
Hughes, Robert J., Tucson, Ariz.
Hughes, Terry L., Dallas, Tex.
Hughes, William, Washington, D.C.
Hulse, Lynne S., Westminster, Md.
Humphrey, Brenda K., Rochester, N.Y.
Humphrey, Mary F., Wilson, N.C.
Humphreys, Beverley A., Fresno, Calif.

Humphries, Marianne, Washington, D.C.
Hundley, Marilyn P., Portsmouth, Va.
Hunsaker, Cecelia A., Buena Park, Calif.
Hunt, Norene, Sulphur, Okla.
Hunter, Christopher H., Hoffman Estate, Ill.
Hunziker, Aletha J., St. Augustine, Fla.
Huppe, Mary L., Morganton, N.C.
Hurd, Uel, Olathe, Kans.
Hurowitz, Lucille J., Staunton, Va.
Hursh, Carl R., Pittsburgh, Pa.
Hurwitz, Tracy A., Rochester, N.Y.
Husak, Frank M., Riverside, Calif.
Hutcheon, Lillian M., Evanston, Ill.
Hutchinson, Meda S., Washington, D.C.
Hutto, Danny, Wilson, N.C.
Hutton, Gretchen S., Valdosta, Ga.
Hyatt, Marjorie L., Landover, Md.
Hyman, Sandra E., W. Hartford, Conn.

I

Ice, Dale A., Cave Spring, Ga.
Igleheart, Betty R., Brattleboro, Vt.
Igleheart, Elliott H., Brattleboro, Vt.
Iliff, Charlotte A., St. Augustine, Fla.
Imboden, Jean C., Jacksonville, Ill.
Imme, Nicholas J., Baton Rouge, La.
Imperiale, Vivian M., San Francisco, Calif.
Ingram, Robert M., Detroit, Mich.
Ireland, Andree B., Tucson, Ariz.
Irwin, Vincent C., Berkeley, Calif.
Isaacs, Patricia E., Hickory, N.C.
Isbell, Florence M., Jackson, Miss.
Ishikawa, Susan, Visalia, Calif.
Ivens, Marianne M., Houston, Tex.

J

Jach, Roberta M., Delavan, Wis.
Jack, D. Bruce, Winnipeg, Man., Canada
Jackson, Patricia J., Colorado Springs, Colo.
Jackson, Roger K., Grand Rapids, Mich.
Jacobs, Beth, Sylvania, Ohio
Jacobs, Eunice, Faribault, Minn.
Jacobs, Joanne B., Rockville, Md.
Jacobs, Joanne D., Austin, Tex.
Jacobs, Leo M., Berkeley, Calif.
Jaech, Timothy A., Riverside, Calif.
Jankoff, Jacqueline, New York, N.Y.
Jankowski, Joan M., DeKalb, Ill.
Jaworski, Mary A., Indialantic, Fla.
Jeffers, Marilyn, Little Rock, Ark.
Jelinek, Joyce C., Rochester, N.Y.
Jenkelunas, Kathleen M., W. Hartford, Conn.
Jenkins, Lorraine V., Salem, Oreg.
Jenks, Mary A., Tuscaloosa, Ala.
Jennings, Diann R., Jackson, Miss.
Jennings, Sharon D., Charlotte, N.C.
Jennings, Theo Cristine, Alhambra, Calif.
Jensen, Donald L., Ogden, Utah
Jensen, James D., Rochester, N.Y.
Jensen, Ruth L., Portland, Oreg.
Jenson, Pauline M., Trenton, N.J.
Jimcosky, Theresa A., Scranton, Pa.
Jobe, Joyce M., Jacksonville, Ill.
Johnson, Carla L., Pittsburgh, Pa.
Johnson, Jr., Charles H., Talladega, Ala.
Johnson, Cheryl M., St. Augustine, Fla.
Johnson, Donald D., Rochester, N.Y.
Johnson, Donna, Covina, Calif.
Johnson, Efford W., Omaha, Nebr.
Johnson, Emma, Cave Spring, Ga.
Johnson, Jackie E., St. Augustine, Fla.
Johnson, Louise P., Frederick, Md.
Johnson, Margaret F., Hampton, Va.
Johnson, Maryann H., Baton Rouge, La.
Johnson, Mary E., Portland, Maine
Johnson, Michael R., University Park, Pa.
Johnson, Robert C., Washington, D.C.
Johnson, Ruth M., Little Rock, Ark.
Johnson, Susan, Virginia Beach, Va.
Johnson, Toni B., Morganton N.C.
Johnson, Vernon J., Devils Lake, N. Dak.
Johnson, William P., Mt. Pleasant, Iowa
Johnston, Esther H., Jackson, Miss.
Johnston, George W., New York, N.Y.
Johnston, Sandra Y., Talladega, Ala.
Jones, Ann L., Washington, D.C.
Jones, Barbara, Fulton, Mo.
Jones, Barry W., Urbana, Ill.
Jones, Bernhardt, E., Tucson, Ariz.
Jones, Carolyn, Washington, D.C.
Jones, Christina, Silver Spring, Md.
Jones, Cynthia L., University, Ala.
Jones, Dale M., Staunton, Va.
Jones, Earle S., Seattle, Wash.
Jones, Elizabeth, Fulton, Mo.
Jones, Geraldine T., Jackson, Miss.
Jones, Geraldine W., Baton Rouge, La.
Jones, Jan A., Ft. Worth, Tex.
Jones, Janet L., Palm Springs, Calif.
Jones, Lillie D., Jackson, Miss.
Jones, Llewellyn W., Wilson, N.C.
Jones, Lois M., Vancouver, Wash.
Jones, Mary E., Cave Spring, Ga.
Jones, Melody L., Dallas, Tex.
Jones, Nina F., Wilson, N.C.
Jones, Peggy, Baytown, Tex.
Jones, Ray, Northridge, Calif.
Jordan, I. K., Washington, D.C.
Jordan, Jerald, Washington, D.C.
Jordan, Ralph V., Berkeley, Calif.
Jordan, Shirley, Washington, D.C.
Jorgenson, Constance L., Devils Lake, N. Dak.
Joseph, Jean F., W. Hartford, Conn.
Joseph, Sr. Thecla, Buffalo, N.Y.
Joshua, Valree J., Vancouver, Wash.
Joyce, Margaret M., Upper Marlboro, Md.
Judkins, Kathleen, Olathe, Kan.

Jurisich, Nanette V., Westminster, Md.
Jury, Vernice L., Longmeadow, Mass.
Justl, Mary J., Napa, Calif.

K

Kaczmarcik, Irene F., Scranton, Pa.
Kaehler, Trudy J., Watertown, Mass.
Kahn, Sheila, Riverside, Calif.
Kallman, Marilyn D., Tucson, Ariz.
Kaluzny, Linda L., Macomb, Ill.
Kamansky, Annebelle D., El Paso, Tex.
Kamm, Babette A., St. Augustine, Fla.
Kamm, Jeffrey A., St. Augustine, Fla.
Kamuchey, Evelyn I, Austin, Tex.
Kanning, Leore P., Gooding, Idaho
Kantor, Claire B., Newark, N.J.
Kaplan, Harriet, College Park, Md.
Kaplan, Paul E., Paramus, N.J
Kappen, Bernadette M., New York, N.Y.
Karanson, III William A., Bakersfield Calif.
Karben, Frank B., Vancouver, Wash.
Karcinell, Barbara, Long Beach, N.Y.
Karli, Wade M., Faribault, Minn.
Karman, Timothy M., Westminster, Md.
Karpf, Susan W., Savannah, Ga.
Kashkin, Marjorie, Randolph, Mass.
Katz, Susan C., Newark, Del.
Kaufman, Robert, Westminster, Md.
Kaufmann, Dorothy F., Jacksonville, Ill.
Kaufmann, Margaret, Jacksonville, Ill.
Kaufmann, Mira J., Lubbock, Tex.
Kean, Janet L., Trenton, N.J.
Kearley, Frances W., Talladega, Ala.
Kearns, Dianne S., Jackson, Miss.
Kearns, Thomas N., Jackson, Miss.
Keck, Timothy A., Spartanburg, S.C.
Keefer, Keith B., Salem, Oreg.
Keenan, Susan K., Rochester, N.Y.
Keene, Carolyn M., Washington, D.C.
Keighley, David J., Raleigh, N.C.
Keizer, Lois R., Cleveland, Ohio
Kelleher, Barbara, Sioux Falls, S. Dak.
Keller, James F., Tucson, Ariz.
Keller, Kathryn E., Detroit, Mich.
Keller, Mrs. Moe M., West Newton, Mass.
Keller, Phyllis R., White Plains, N.Y.
Kelley, Shirley A., San Antonio, Tex.
Kelley, Walter P., Dallas, Tex.
Kelliher, Marie H., Chicago, Ill.
Kellis, Bonnie J., Los Angeles, Calif.
Kellogg, Barbara W., Utica, Mich.
Kellogg, Robert C., Indianapolis, Ind.
Kelly, David L., Rochester, N.Y.
Kelly, Elizabeth H., White Plains, N.Y.
Kelly, Jane F., Tucson, Ariz.
Kelly, Kitty, Tuscaloosa, Ala.
Kelly, Robert E., Portland, Maine
Kelly, Sandra L., Paola, Kans.
Kelly, Vickie, Baton Rouge, La.
Kelly-Jones, Nancy M., Washington, D.C.
Kelman, Mark, St. Augustine, Fla.
Kemp, Edna F., Cave Spring, Ga.
Kemp, William M., Lampeter, Pa.
Kenealy, Mary, Chicago, Ill.
Kenney, Sr. Bernadette M., Randolph, Mass.
Kenney, Sr. Karen, Brooklyn, N.Y.
Kensicki, Nancy E., Washington, D.C.
Kent, Alice A., Cleveland, Ohio
Kent, Margaret S., Frederick, Md.
Kerikas, Sharon M., Salt Lake City, Utah
Kern, Jean M., Pittsburgh, Pa.
Kern, Thomas R., St. Augustine, Fla.
Kerr, Etta C., St. Augustine, Fla.
Kersbergen, Ronald, Sioux Falls, S. Dak.
Kessen, Sr. Anna, Buffalo, N.Y.
Kessler, Annamae, Pittsburgh, Pa.
Kessler, Evelyn E., Staunton, Va.
Kessler, Marcia S., Huntington Beach, Calif.
Ketchum, Jack E., Muskegon, Mich.
Kicey, Patricia B., Glassboro, N.J.
Kidd, Lois L., Little Rock, Ark.
Kieburtz, Nancy, Lake Ronkonkoma, N.Y.
Kieras, MaryAnn S., Longmeadow, Mass.
Kilani, Barbara E., DeKalb, Ill.
Kile, Margaret A., Phoenix Ariz.
Killam, Doris R., San Angelo, Tex.
Kim, Marilynn C., Honolulu, Hawaii
Kimberlin, Gregory C., Los Angeles, Calif.
Kimmel, Eugene H., Troy, Ohio
Kimpton, Luanne B., Tucson, Ariz.
Kincaid, Sue, Sulphur, Okla.
Kindred, Elizabeth M., Arlington, Va.
King, Sr. Barbara V., Randolph, Mass.
King, Carroll, Dallas, Tex.
King, Crockett W., Knoxville, Tenn.
King, Dorthy, Knoxville, Tenn.
King, Jane, Sioux Falls, S. Dak.
King, Rose C., Hampton, Va.
King, Jr., William G., Lanham, Md.
Kinney, Mary Ann F., Cedar Rapids, Iowa
Kinney, W. R., Sulphur, Okla.
Kipling, Marsha D., Clarkston, Ga.
Kirby, Sr. Alice M., Randolph, Mass.
Kirchner, Carl. J., Washington, D.C.
Kirkham, Jamie K., Houston, Tex.
Kirkpatrick, Mildred, Sulphur, Okla.
Kirksey, Mary H., Morganton, N.C.
Kirwan, Norma J., Washington, D.C.
Kiskaddon, Fay, Evergreen, Colo.
Kitchen, Patricia A., Riverside, Calif.
Kitson, Donald E., St. Augustine, Fla.
Kitson, Mona J., St. Augustine, Fla.
Kleberg, Robert E., Austin, Tex.
Kleifgen, Mary F., LaGrange Park, Ill.
Klein, Mildred, Sioux Falls, S. Dak.
Kleinman, Elsa C., Berkeley, Calif.
Klenke, Paul, Cincinnati, Ohio
Kline, Lorraine F., Jacksonville, Ill.

Klodd, Bonita L., Wausau, Wis.
Klopping, Henry W., Berkeley, Calif.
Klopping, Sandra L., Berkeley, Calif.
Kloster, Louanne, Olathe, Kans.
Kluth, Shirley J., Riverside, Calif.
Knudson, Bradley G., Phoenix, Ariz.
Koch, Richard L., Staunton, Va.
Koenig, Mary F., Pittsburgh, Pa.
Koepke, Kim M., Dallas, Tex.
Koester, Miriam M., Gooding, Idaho
Kolon, Annette B., Warren, Mich.
Komori, Hiroko, Riverside, Calif.
Kopstein, Sherry E., Philadelphia, Pa.
Kornblith, Anne L., Rockville, Md.
Korschgen, Marjorie I., Jacksonville, Ill.
Kos, Susanne, Dallas, Tex.
Kosydar, Andrea T., Scranton, Pa.
Kovatch, Robert A., Indianapolis, Ind.
Kowalewski, Felix A., Riverside, Calif.
Kowalewski, Laura E., Riverside, Calif.
Koziar, Stephen, Fulton, Mo.
Kraemer, Margaret E., Brattleboro, Vt.
Kraft, Barbara, Baton Rouge, La.
Kraft, Sharon, A., Claremont, N.H.
Krahe, Jane B., Santa Ana, Calif.
Krajacich, Lucille M., Great Falls, Mont.
Kramer, Arlene M., Overbrook, Pa.
Krasia, Gertrude, Santa Fe, N. Mex.
Kreis, Max S., San Diego, Calif.
Krell, Dennis J., Seattle, Wash.
Kretschmer, Robert E., Kansas City, Mo.
Kriehn, George J., Dallas, Tex.
Kritz, Kenneth W., Frederick, Md.
Krohn, Emmylou, Council Bluffs, Iowa
Krone, Norma J., Champaign, Ill.
Krug, Adele J., Washington, D.C.
Krug, Richard F., Boulder, Colo.
Kruhm, Deborah W., Santa Fe, N. Mex.
Kruse, Edwin G., Rochester, N.Y.
Krusemark, Darlene K., Downey, Calif.
Kubis, John J., Washington, D.C.
Kubotsu, Teruko, Riverside, Calif.
Kuder, Elizabeth E., Longmeadow, Mass.
Kugel, Anita S., Morganton, N.C.
Kugel, Stephan P., Morganton, N.C.
Kukleski, Audrian M., Pittsburgh, Pa.
Kunz, Linda R., Westminster, Md.
Kunzelman, Laurie A., Pittsburgh, Pa.
Kurashige, Joan Y., Honolulu, Hawaii
Kurs, Mitchell L., Riverside, Calif.
Kurth, Don D., Des Moines, Iowa
Kurtz, Clara, Fulton, Mo.
Kushner, Alice H., Gambrills, Md.
Kutlu, Ms. Gulhan, Columbus, Ohio
Kutzera, Bert S., Jacksonville, Ill.
Kuyrkendall, Archie, Baton Rouge, La.
Kyle, Lydia S., Knoxville, Tenn.

L

Labelle, Fay S., Ft. Lauderdale, Fla.
Ladis, Maria T., Talladega, Ala.
LaFans, Ruth, St. Augustine, Fla.
Lafeman, Jack A., Vancouver, Wash.
LaFerriere, Denise, Portland, Me.
Lahcanski, Vesela, Rochester, N.Y.
LaLonde, Lisa, Buffalo, N.Y.
Lamb, Alfred J., Indianapolis, Ind.
Lamb, Patricia A., Delavan, Wis.
LaMee, Jr., Clyde E., St. Augustine, Fla.
Lamm, Carolyn O., Spartanburg, S.C.
Lamphier, Carol M., Santa Ana, Calif.
Lampkin, Elton, Baton Rouge, La.
Lander, Sr. Rose Mary, Buffalo, N.Y.
Landers, Adrienne L., Hickory, N.C.
Landesman, Dennis, Santa Ana, Calif.
Lane, Brenda A., Hickory, N.C.
Lane, Elnora B., Hampton, Va.
Lane, Sr. Madeline L., Randolph, Mass.
Lane, Richard K., Brattleboro, Vt.
Laney, Mary C., Spartanburg, S.C.
Lang, Bonnie M., Rochester, N.Y.
Lang, Harry G., Rochester, N.Y.
Lang, Susan, San Antonio, Tex.
Lange, Keith F., Salem, Oreg.
Lange, Rebecca H., Los Angeles, Calif.
Lange, Robert W., St. Augustine, Fla.
Langley, Charles D., Talladega, Ala.
Langlois, Sr. Doris A., Randolph, Mass.
Lanzi, Peter C., Riverside, Calif.
Laptad, Marese, Olathe, Kans.
Laptad, Ruth A., Olathe, Kans.
Laramie, Dora B., Ogden, Utah
Lareau, Penny L., Westminster, Md.
LaRossa, Sharon, Levittown, Pa.
Larson, Joan E., Beverly, Mass.
Larson, Vern, Washington, D.C.
LaSasso, Carol J., Washington, D.C.
Latimer, Esperanza C., Santa Fe, N. Mex.
Laughton, Joan, Tallmadge, Ohio
Lauritsen, Robert, W. St. Paul, Minn.
Lawrence, Daniel R., Rochester, N.Y.
Lawson, Betty M., Knoxville, Tenn.
Lawson, Pat, Sulphur, Okla.
Lawson, Robert S., Knoxville, Tenn.
Lawyer, Evelyn R., Alhambra, Calif.
Layne, Charles A., Rochester, N.Y.
Lazzari, Nina M., Council Bluffs, Iowa
Lazzaro, Virginia, Omaha, Nebr.
Leaders, Elvira, Omaha, Nebr.
LeBuffe, James R., Newark, Del.
LeBuffe, Leon A., Washington, D.C.
LeCavalier, Diane C., Lakewood, Colo.
Ledford, Bobby R., Morganton, N.C.
Lee, Elizabeth L., Bristol, Va.
Lee, Lois L., St. Croix, Virgin Islands
Lee, Marcia M., Muncie, Ind.
Lee, Milton A., Delavan, Wis.
Lee, Rena M., Salem, Oreg.
Lee, Russell E., Jackson, Miss.
Lee, Sally A., Jackson, Miss.
Lee, Wanda W., Glenmont, N.Y.
Leech, Virginia L., Carnegie, Pa.
Leeds, Naomi C., Wantagh, N.Y.
Leezer, Jeanne A., Lombard, Ill.
LeFort, Claudia, Baton Rouge, La.
Lehe, Nancy R., Talladega, Ala.

Lehnert, Corinne E., Baltimore, Md.
Lehrer, Noel, Hattiesburg, Miss.
Leman, Charles W., Flint, Mich.
LeMieux, Robert T., Great Falls, Mont.
LeNard, Judith M., Washington, D.C.
Lennan, Robert K., Riverside, Calif.
Lennon, Patricia A., Mill Neck, N.Y.
Lenox, James P., W. Trenton, N.J.
Lenth, J. William, Tacoma, Wash.
Leonardi, Irene C., W. Trenton, N.J.
Lepera, Mrs. James, Santa Clara, Calif.
LeRoy, Barbara D., Wemme, Oreg.
LeRoy, Sr. M. Pauline, Buffalo, N.Y.
Lesesne, Ruth, Austin, Tex.
Lesser, Sr. Rosemary, Brooklyn, N.Y.
Letourneau, Sr. Nora, Buffalo, N.Y.
Levine, Edna S., New York, N.Y.
Leviner, Peggy G., Morganton, N.C.
Levy, Harold M., St. Thomas, Virgin Islands
Levy, Lois E., Houston, Tex.
Lewin, Mary, Gurnee, Ill.
Lewis, A. P., Sulphur, Okla.
Lewis, Carolyn K., Tulsa, Okla.
Lewis, Hugh B., St. Augustine, Fla.
Lewis, Lucy A., Riverside, Calif.
Liao, Mary Anne, Lake Ronkonkoma, N.Y.
Lieser, Marian L., Lakewood, Ohio
Liess, Anne E., Rochester, N.Y.
Liffengren, Luceal, Omaha, Nebr.
Liles, Eleanor H., Wilson, N.C.
Lill, Daniel F., Rochester, N.Y.
Limoli, Frank, White Plains, N.Y.
Lincicome, Sandra G., Minneapolis, Minn.
Lindblom, Elsie M., Portland, Maine
Linden, Hillary J., Los Angeles, Calif.
Linder, Marian J., New York, N.Y.
Lindquist, Deana B., Gurnee, Ill.
Lindsey, David M., Virginia Beach, Va.
Lingerfelt, Marilyn H., Morganton, N.C.
Linzey, Robert W., Romney, W. Va.
Lippens, Gary A., Washington, D.C.
Liss, Bonnie E., Dayton, Ohio
Liston, Lynn, DeKalb, Ill.
Litchfield, Kendall D., White Plains, N.Y.
Little, Cherryl C., Jacksonville, Fla.
Little, James A., Santa Fe, N. Mex.
Liu, Emma S., Pittsburgh, Pa.
Lively, Lois, Cave Spring, Ga.
Livingston, Georgia P., Houston, Tex.
Livingston, Joseph E., Greeley, Colo.
Llanes, Haydee M., Riverside, Calif.
Lloyd, Ethel L., Jackson, Miss.
Lloyd, Lyle L., Washington, D.C.
Lobherr, Mary R., Riverside, Calif.
Lockamyeir, Judith, Rochester, N.Y.
Lockhart, Betty J., Little Rock, Ark.
Loewenthal, Terri R., St. Louis, Mo.
Logan, Janice L., Salem, Oreg.
Lohman, Edith D., Manassas, Va.
Lolan, Thomas C., Dayton, Ohio
Lombardi, Ann T., Buffalo, N.Y.
Long, Garrett R., Montreal, Quebec, Canada
Long, Rebecca, Montreal, Quebec, Canada
Longchamps, Jacqueline, Rochester, N.Y.
Lonky, Marilyn P., San Diego, Calif.
Loomis, Sharon, Faribault, Minn.
Loop, Susan F., Windsor, Conn.
Lorentz, Joan, Roxbury, Mass.
Lorentz, Marie E., Vale, Oreg.
Lott, Laura, Longview, Tex.
Loughin, Bertha, Portland, Maine
Loughran, Rosalin D., Riverside, Calif.
Lovelace, Frances, Talladega, Ala.
Lowell, Edgar L., Los Angeles, Calif.
Lowell, Neil F., Delavan, Wis.
Lowenbraun, Sheila, Seattle, Wash.
Lowry, Jeanne E., Frederick, Md.
Loxterman, Dennis, Olathe, Kans.
Loysen, Garry J., Rochester, N.Y.
Loysen, Jeanne M., Rochester, N.Y.
Lozowski, Patricia A., Albuquerque, N. Mex.
Lubbers, Earl R., Tucson, Ariz.
Lucas, Arlene B., Pittsburgh, Pa.
Lucas, Jacqueline W., Wilson, N.C.
Ludivico, Ruth G., Pittsburgh, Pa.
Ludwig, John D., Bakersfield, Calif.
Lujan, Joanne, Santa Ana, Calif.
Luke, Alexis, Alhambra, Calif.
Lukeman, Ann, Urbana, Ill.
Lumpkins, Janette, Portland, Maine
Luna, Gayle, Sulphur, Okla.
Lunestad, Sandra F., St. Augustine, Fla.
Lundmark, Susan M., Berkeley, Calif.
Lurwick, Donald R., Romney, W. Va.
Luterman, David, Boston, Mass.
Lutz, Martha, Fulton, Mo.
Lyans, Dorothy W., Alhambra, Calif.
Lyas, Esther B., Hampton, Va.
Lynch, Ann E., Jackson, Tenn.
Lynch, Daniel J., Berkeley, Calif.
Lynch, Irene M., Indianapolis, Ind.
Lynch, Sr. Jane C., Buffalo, N.Y.
Lynch, Kathleen A., Newark, Del.
Lyon, Pamela A., Kansas City, Kans.
Lytle, Linda R., Washington, D.C.
Lytle, Richard G., Washington, D.C.

Mc

McAdam, Colin, Faribault, Minn.
McAdams, R. M., Wilson, N.C.
McAleer, I. Marlene, Washington, D.C.
McAnally, Pat, Normal, Ill.
McAuley, Daniel L., Portland, Oreg.
McBride, Janet E., Lansdale, Pa.
McBride, Joan, St. Augustine, Fla.
McBride, Robert E., Talladega, Ala.
McCabe, Ann-Marie, Colorado Springs, Colo.
McCabe, Diana M., Lake Ronkonkoma, N.Y.
McCahill, Patrick P., Bronx, N.Y.

McCain, Willie, Cave Spring, Ga.
McCall, Joyce D., Morganton, N.C.
McCall, Karen A., Bangor, Maine
McCall, Marilyn, Riverside, Calif.
McCall, Mary H., Raleigh, N.C.
McCann, Eileen M., New York, N.Y.
McCarthy, Sr. Mary L., Randolph, Mass.
McCartney, Brian D., Jackson Heights, N.Y.
McCartt, Lee, Knoxville, Tenn.
McCarty, Oleta, Sulphur, Okla.
McChord, Jr., W. Winfield, Danville, Ky.
McClain, Lenore, Knoxville, Tenn.
McClain, Sara, Missoula, Mont.
McClarrinon, Richard S., Muncie, Ind.
McClary, Dorothy, Fulton, Mo.
McClenathan, Sr. Melrose Therese, Buffalo, N.Y.
McClure, William J., St. Augustine, Fla.
McCollom, Florence S., Great Falls, Mont.
McConnell, Martha, Danville, Ky.
McConnell, William, Hampton, Va.
McConvey, William A., Buffalo, N.Y.
McCord, III, W. Samuel, Morganton, N.C.
McCormack, Sr. Rita, Randolph, Mass.
McCormick, Madeline J., Morganton, N.C.
McCubbin, Mona K., Clarkston, Ga.
McCullough, Connie, Pittsburgh, Pa.
McDaniel, Mary L., Morganton, N.C.
McDaniel, Rebecca W., Marietta, Ga.
McDermott, Elizabeth, New York, N.Y.
McDermott, Maryann K., Washington, D.C.
McDermott, Patricia M., Brooklyn, N.Y.
McDonald, Loretta A., Honolulu, Hawaii
McDonald, Sr. Margaret M., Randolph, Mass.
McDonough, Deborah A., Chattanooga, Tenn.
McElroy, Linda Jr., Tucson, Ariz.
McFarland, Janice K., Tucson, Ariz.
McGann, Patricia A., Tucson, Ariz.
McGarry, Barbara, Riverside, Calif.
McGarry, David A., Riverside, Calif.
McGarry, Lina D., Mountlake Terrace, Wash.
McGee, Donald L., Fairfax, Va.
McGennis, Sandra K., Great Falls, Mont.
McGill, Daniel G., Austin, Tex.
McGill, David K., W. Hartford, Conn.
McGill, Gertie E., Austin, Tex.
McGinnis, Paul E., Santa Fe., N. Mex.
McGlamery, Sarah J., Las Vegas, Nev.
McGrane, Sr. M. Eymard, Randolph, Mass.
McGuinness, David J., Washington, D.C.
McHale, Diane L., Rochester, N.Y.
McHuley, Daniel, Raleigh, N.C.
McIntire, Maryann, Vancouver, Wash.
McKenzie, Carol L., Madisonville, Tenn.
McKenzie, Kathleen K., Bristol, Va.
McKeon, James J., Delavan, Wis.
McKeon, W. Scott, Columbus, Ohio
McKinley, Helen D., Seattle, Wash.
McKinney, Sharon W., Spartanburg, S.C.
McKinney, Virginia E., Los Angeles, Calif.
McLaughlin, Ellen M., Milwaukee, Wis.
McLean, Nancy, Santa Fe, N. Mex.
McLelland, Helen L., Staunton, Va.
McLelland, Paul E., Staunton, Va.
McLennan, Norman J., Salem, Oreg.
McMahon, Margo E., Amherst, Mass.
McMaster, Ronald B., Ridgeland, Miss.
McMullin, Thomas J., Pittsburgh, Pa.
McMunn, Norma, Fulton, Mo.
McNamara, Isabelle L., Vancouver, Wash.
McPeak, Elizabeth T., Pittsburgh, Pa.
McPhedran, Marjorie J., Edmonton, Alberta, Canada
McPherson, Deborah L., Geneseo, N.Y.
McPherson, Myra J., Sarasota, Fla.
McPherson, Pamela E., Chickasha, Okla.
McQuistion, Mark T., Rochester, N.Y.
McSwain, Carol G., Buffalo, N.Y.
McTigue, Eloise, Berkeley, Calif.
McTiernan, MaryLou, White Plains, N.Y.
McWilliams, Susanne C., Morganton, N.C.

M

Maas, Mathias, Vancouver, Wash.
Mabry, Miss Jimmie S., Little Rock, Ark.
MacAskill, Diane A., Knoxville, Tenn.
MacDonald, Jane H., Houston, Tex.
MacDowell, Arden J., Overland Park, Kans.
MacFarlane, Harriet T., Portsmouth, Va.
Mackall, Philip L., Gambrills, Md.
MacKenzie, Janice L., Vancouver, Wash.
Macklin, Georgia D., Syracuse, N.Y.
Maclaga, Susan, Raleigh, N.C.
MacNeil, Barbara J., San Diego, Calif.
MacNeil, Linda D., Lawndale, Calif.
Maddox, Helen B., Spartanburg, S.C.
Mader, Judith C., Dayton, Ohio
Madron, Catherine, Knoxville, Tenn.
Magee, Gilbert R., Jackson, Miss.
Magill, Medford, Baton Rouge, La.
Magnin, Edgar J., Los Angeles, Calif.
Magno, Carmen P., St. Augustine, Fla.
Magram, David, Elmont, N.Y.
Magyar, Eleanor S., Pittsburgh, Pa.
Mahar, Ellen R., Rochester, N.Y.
Maharry, Marion F., Hialeah, Fla.
Maison, Elizabeth J., Beverly Hills, Calif.
Majestic, Mary E., Mill Neck, N.Y.

Makela, Jean E., Little Rock, Ark.
Malcolm, Andrew, Rochester, N.Y.
Male, Mary, Austin, Tex.
Mallincrodt, Betty, Fulton, Mo.
Malmberg, Geraldine, Pittsburgh, Pa.
Malone, Sr. Mildred T., Randolph, Mass.
Malphurs, Jane L., Jackson, Miss.
Malzkuhn, Brian L., Riverside, Calif.
Mamula, Annette N., California, Pa.
Manansala, Lourdes S., Baltimore, Md.
Mancini, Mary E., Buffalo, N.Y.
Maney, Ellen S., Pittsburgh, Pa.
Mangan, James J., Hackensack, N.J.
Mangan, Kenneth R., Jacksonville, Ill.
Mann, Kent, Danville, Ky.
Mann, Loisteen J., Clarkston, Ga.
Mann, Mary M., Council Bluffs, Iowa
Mann, Nancy A., Danville, Ky.
Manshel, Hannah, White Plains, N.Y.
Mantle, J. Ervin, Ogden, Utah
Manzo, Patricia B., Covina, Calif.
Marhefka, Frank R., California, Pa.
Markey, Francis B., Brattleboro, Vt.
Marley, JoEllen, Philadelphia, Pa.
Marra, William J., Olathe, Kans.
Marriner, Rebecca, Pittsburgh, Pa.
Marsh, Jr., Charles E., Olathe, Kans.
Marsh, Kathleen M., Olathe, Kans.
Marshall, Deborah A., Roanoke, Va.
Marshall, Erwin W., Berkeley, Calif.
Marshall, Margaret D., Danville, Ky.
Marshall, Marvin J., Indianapolis, Ind.
Marshall, Phillip G., Austin, Tex.
Marshall, Teresa A., Indianapolis, Ind.
Martin, Anne, Knoxville, Tenn.
Martin, Donna M., Danville, Ky.
Martin, Judith A., Santa Ana, Calif.
Martin, Linda L., Washington, D.C.
Martin, Max, Sulphur, Okla.
Martin, Merle R., Morganton, N.C.
Martin, R. L., Jacksonville, Ill.
Martin, Sally, Baton Rouge, La.
Martins, Gary, Milton, Ontario, Canada
Martyka, Emilia C., Detroit, Mich.
Marvel, Peggy S., Philadelphia, Pa.
Marvelli, Alan L., Northampton, Mass.
Marzolf, Michael B., Staunton, Va.
Mason, Jeanne M., New York, N.Y.
Mason, Leroy W., Alhambra, Calif.
Mason, Warren M., Salem, Oreg.
Massey, James F., Wilson, N.C.
Massey, Linda B., Wilson, N.C.
Masters, Karen L., Pueblo, Colo.
Mathewson, Penelope, Alhambra, Calif.
Matney, Jean P., Ft. Worth, Tex.
Matsen, Richard, Wilson, N.C.
Matson, John M., Talladega, Ala.
Matteson, Carol, Rome, N.Y.
Matthews, Brenda J., Fayetteville, Ark.
Mattews, Martha E., Houston, Tex.
Matthews, T. Colleen, Peoria, Ill.
Mattos, Sandra A., Rio Piedras, P.R.
Mattson, Marcia E., Philadelphia, Pa.
Maupin, Diana, Fulton, Mo.
Mavilya, Marya, Coral Gables, Fla.
Maxfield, Doreen, Knoxville, Tenn.
Maxwell, Joseph, Portland, Maine
Maxwell, Madeline M., Tucson, Ariz.
May, Barbara J., Danville, Ky.
May, Carol C., Riverside, Calif.
May, Diane, St. Augustine, Fla.
May, Judith L., Tucson, Ariz.
May, Karl H., Tucson, Ariz.
May, Nadene W., Danville, Ky.
Mayberry, Rachel I., Montreal, Quebec, Canada
Maye, Thomas J., Morganton, N.C.
Mayer, Sarah J., Los Angeles, Calif.
Mayes, Julia B., Washington, D.C.
Mayfield, R. E., Wilson, N.C.
Mays, Mary A., Casper, Wyo.
Meade, Cheryl A., Covina, Calif.
Meador, Kelly L., Austin, Tex.
Measeles, Evelyn, Santa Fe, N. Mex.
Medeiros, Sarah J., Fairfax, Va.
Medlock, Hilda, Little Rock, Ark.
Meek, Earle B., Frederick, Md.
Mehl, Albert F., Morganton, N.C.
Meier, M. June, Great Falls, Mont.
Meiners, Linda L., Tucson, Ariz.
Meisegeier, Richard W., Washington, D.C.
Meisel, Adrienne, Winnetka, Ill.
Melancon, Faye, Baton Rouge, La.
Melby, Daisy, Spartanburg, S.C.
Melendez, Kathy, Knoxville, Tenn.
Melton, Jr., William A., Colorado Springs, Colo.
Mendygral, Irene, Lombard, Ill.
Mensia, Nettie W., Chesapeake, Va.
Menson, Stanley, Riverside, Calif.
Mercurio, MaryAnn, Hackensack, N.J.
Merlino, Robert F., Vancouver, Wash.
Merrell, Sonja, Pittsburgh, Pa.
Merrill, Edward C., Washington, D.C.
Meyer, Catherine L., Clarendon Hills, Ill.
Michaels, Kenneth R., Morganton, N.C.
Michelson, Rhonda D., Coolidge, Ariz.
Miescher, Frances R., Tucson, Ariz.
Mikos, Kenneth, Berkeley, Calif.
Milesky, Samuel D., Madison, Wis.
Milford, John T., Tucson, Ariz.
Millard, Robert, Spartanburg, S.C.
Miller, Betty G., Washington, D.C.
Miller, Carol R., Reading, Pa.
Miller, Carolyn M., Flint, Mich.
Miller, Dan, Danville, Ky.
Miller, Elizabeth A., Jacksonville, Ill.
Miller, Fani B., Washington, D.C.
Miller, Frederick A., Concord, N.H.
Miller, June B., Kansas City, Kans.
Miller, Loretta, Sioux Falls, S. Dak.
Miller, Pamela L., DeKalb, Ill.
Miller, Sandra S., Las Vegas, Nev.
Miller, Wanda L., Berkeley, Calif.
Milligan, Bertha, White Plains, N.Y.
Milligan, Kevin, Buffalo, N.Y.
Milligan, William M., White Plains, N.Y.
Mills, Bettina E., Talladega, Ala.

Mills, Mary L., Muscatine, Iowa
Mills, Thelma F., Danville, Ky.
Mims, Anne V., Greensboro, N.C.
Minarich, Ann, Omaha, Nebr.
Minger, Pamela D., Washington, D.C.
Minihan, Helen R., Perry, N.Y.
Minissale, Kathleen B., Dallas, Tex.
Minner, Mary L., Pittsburgh, Pa.
Minshew, Diane G., Cave Spring, Ga.
Minton, Nita M., Columbia, Md.
Miracle, Janet, Olathe, Kans.
Miske, Richard, Faribault, Minn.
Mitchell, Betty S., Morganton, N.C.
Mitchell, Diane N., Rochester, N.Y.
Mitchell, Dorothy B., Morganton, N.C.
Mitchell, Jan, Talladega, Ala.
Mnich, Wayne C., Talladega, Ala.
Moats, Cheryl L. Columbus, Ohio
Mobley, Glenda W., W. Trenton, N.J.
Mobley, Robert T., W. Trenton, N.J.
Modzelewski, Karen S., Hadley, Mass.
Moe, Eunice W., Rockville, Md.
Moen, Karen, Sioux Falls, S. Dak.
Moffitt, Ruby L., Staunton, Va.
Mohan, Judy P., Danville, Ky.
Moline, Grace, Clarendon Hills, Ill.
Mollo, Marianne K., Newark, N.J.
Molloy, Jr., John F., Bloomfield Hills, Mich.
Molloy, Sr. Mary T., Lake Ronkonkoma, N.Y.
Monaghan, Bilbo, Knoxville, Tenn.
Moncrief, Clara B., Talladega, Ala.
Monk, George T., Lansing, Mich.
Monroe, Ann S., Winston-Salem, N.C.
Monsees, Edna K., Rockville, Md.
Montgomery, Callie, Cave Spring, Ga.
Montgomery, Jeani L., Danville, Ky.
Montgomery, Vickie, Olathe, Kans.
Montoya, Arthur A., Riverside, Calif.
Moody, Douglass, Portland, Maine
Moore, Corina, Spartanburg, S.C.
Moore, Harold, Newark, N.J.
Moore, Jean P., Washington, D.C.
Moore, Leander, Knoxville, Tenn.
Moore, Marjorie, Ft. Worth, Tex.
Moore, Melinda K., Raleigh, N.C.
Moore, Michael R., Jacksonville, Ill.
Moore, Sr. Theresa, Buffalo, N.Y.
Mooring, Dorothy P., Frederick, Md.
Morehead, Libby, Harvey, Ill.
Mortez, Ellen C., Hickory, N.C.
Morgan, Billy W., Jackson, Miss.
Morgan, Martha K., Dallas, Tex.
Morgan, Phyllis H., Spartanburg, S.C.
Morganstein, Mrs. Toby, Rochester, N.Y.
Morris, Frederick, Rome, N.Y.
Morris, Joan P., Pensacola, Fla.
Morris, Judith A., Wilson, N.C.
Morris, Linda D., Beaumont, Tex.
Morris, Mildred L., Spartanburg, S.C.
Morrison, Barbara, Fulton, Mo.
Morrison, Helen C., Jackson, Miss.
Morrison, Robert, Fulton, Mo.
Morrow, Robert H., Spartanburg, S.C.
Mort, Donna L., Tucson, Ariz.
Mortimer, Louise A., Washington, D.C.
Morton, Pauline J., South Bend, Ind.
Moser, Linda B., Little Rock, Ark.
Moser, Madalyn, Pittsburgh, Pa.
Mosher, Nancy A., San Antonio, Tex.
Moss, Pamela G., Holloman Air Force Base, N. Mex.
Mossel, Max, Olathe, Kans.
Motherseil, Lawrence L., Rochester, N.Y.
Motley, Gene R., St. Augustine, Fla.
Motley, Jeanne R., Montrose, Colo.
Motley, Ruth G., St. Augustine, Fla.
Moufang, Deborah, Millburn, N.J.
Mowl, Jr., Harold M., Pittsburgh, Pa.
Mrizek, Shirley M., Carmichael, Calif.
Mucciolo, John L., White Plains, N.Y.
Muegge, Jane A., Tyler, Tex.
Mueller, Linda G., Ann Arbor, Mich.
Mueller, Margaret S., St. Augustine, Fla.
Muller, Ruth E., Olathe, Kans.
Mull, Betty S., Morganton, N.C.
Mull, Mable M., Morganton, N.C.
Mullen, William, Washington, D.C.
Muller, Keith D., New York, N.Y.
Mullinix, Charlene, Hickory, N.C.
Mullins, Richard M., Great Falls, Mont.
Munger, Shirley A., St. Louis, Mo.
Munn, Roy D., Austin, Tex.
Munro, Diane M., Indianapolis, Ind.
Munroe, Susan, New York, N.Y.
Munson, Anne G., Mill Neck, N.Y.
Murapa, Barbara D., Rochester, N.Y.
Murphy, Billie J., Little Rock, Ark.
Murphy, Fred R., Olathe, Kans.
Murphy, Harry, Northridge, Calif.
Murphy, Joan M., Riverside, Calif.
Murphy, Lee C., Knoxville, Tenn.
Murphy, Sr. Mary Patrick, Buffalo, N.Y.
Murray, John F., Cumberland, Wis.
Murray, John R., Brownsville, Tex.
Murray, Winona L., San Pedro, Calif.
Murrell, Margaret, Little Rock, Ark.
Muse, Helen, Cave Spring, Ga.
Musmanno, Madeline F., Riverside, Calif.
Myers, Helen, Berkeley, Calif.
Myers, Willa, Gooding, Idaho
Nagel, Robert F., New Haven, Conn.
Nagy, Edward J., Cave Springs, Ga.
Nagy, Mark M., Jacksonville, Ill.
Naiman, Francie S., Bronx, N.Y.
Nann, Beth L., Hickory, N.C.
Naples, Mary A., Rome, N.Y.
Nash, Gayle L., Normal, Ill.
Nations, Susan, Sumter, S.C.
Naud, Jean-Guy, Rochester, N.Y.
Naus, Brenda, Bloomsburg, Pa.
Nave, Karen S., Seattle, Wash.
Neal, Ermine C., Marion, N.C.
Neal, Margaret E., Alhambra, Calif.
Needham, Richard M., Columbus, Ohio
Neesam, Ralph, Berkeley, Calif.
Neill, Helen M., Washington, D.C.

Neleigh, Janice L., Pittsburgh, Pa.
Nelson, Arlene W., Jacksonville, Ill.
Nelson, Bonita C., Salem, Oreg.
Nelson, Carol, Washington, D.C.
Nelson, Katherine, Baton Rouge, La.
Nelson, Pat, Gooding, Idaho
Nelson, Ruth E., Monmouth, Oreg.
Nesbit, Michelle M., Rochester, N.Y.
Nesoff, Tema S., Seattle, Wash.
Nester, Kay, Clarkston, Ga.
Nestor, Jr., Stephen F., Canton, Mass.
Neuhaus, Marcia D., San Antonio, Tex.
Neumann, Donald A., Tucson, Ariz.
Newberry, Frederick J., Northridge, Calif.
Newbold, Dwight B., Frederick, Md.
Newbrough, Betty G., Berkeley, Calif.
Newby, Robert F., Philadelphia, Pa.
Newell, William J., Minneapolis, Minn.
Newkirk, June E., Northridge, Calif.
Newman, Betty M., Riverside, Calif.
Newman, C. Denis, Belleville, Ont., Canada
Newman, Lawrence R., Santa Ana, Calif.
Newman, Susan C., Jacksonville, Ill.
Neyhus, Arthur I., Chicago, Ill.
Nichols, Nadine L., Riverside, Calif.
Nicholson, Evelyn, Knoxville, Tenn.
Nicolai, Richard D., Indianapolis, Ind.
Niedegerke, Claude, Fulton, Mo
Niedzialek, Jr., Edward J., Rochester, N.Y.
Nies, Barbara C., White Plains, N.Y.
Nishimura, Jacqueline K., Seattle, Wash.
Nolan, Kevin J., Beverly, Mass.
Nomeland, Ronald E., Washington, D.C.
Nordmann, Susan, Portland, Maine
Noren Gayle, Tustin, Calif.
Norman, June R., Jackson, Miss.
Norris, Arthur G., Silver Spring, Md.
Norris, Beryl E., Lansdale, Pa.
Norris, Bette F., Greensboro, N.C.
North, Sr. Rose Anita, Buffalo, N.Y.
Northcutt, Lyla L., Colorado Springs, Colo.
Norton, Kenneth, Berkeley, Calif.
Norwood, Joyce M., Hampton, Va.
Norwood, Malcolm, Washington, D.C.
Noschese, James C., Pittsburgh, Pa.
Noteboom, Frances K., Sioux Falls, S. Dak.
Novick, Leonard, Brooklyn, N.Y.
Nowell, Richard C., Rochester, N.Y.
Nunley, Thomas S., Santa Fe, N. Mex.
Nunn, Rodney C., Little Rock, Ark.
Nunnery, Joseph, Jackson, Miss.
Nutt, Houston, Little Rock, Ark.
Nye, William, Portland, Maine

O

Oatis, Patrick R., Indianapolis, Ind.
O'Brien, Deborah A., Mill Neck, N.Y.
O'Brien, Elizabeth H., Rochester, N.Y.
O'Brien, Henry J., White Plains, N.Y.
O'Brien, Michael C., Vancouver, Wash.
Ochs, Regina M., Ogden, Utah
O'Connell, Susan S., Phoenix, Ariz.
O'Connor, Sr. M. Joanita, Randolph, Mass.
O'Donnell, Sr. Jacqueline, Buffalo, N.Y.
Odzer, Olivia P., Scranton, Pa.
Ogan, Edith, Sulphur, Okla.
Ogden, Sr. Angelene, Chicago, Ill.
Ogletree, Barbara L., Morganton, N.C.
O'Grady, Rosemary E., Bronx, N.Y.
Ohlinger, Betty P., Riverside, Calif.
Oja, Marcia H., St. Augustine, Fla.
Oja, Norman L., St. Augustine, Fla.
Okamura, Helen K., Seattle, Wash.
Okizaki, Cheryl L., Lakewood, Colo.
Olander, Mary E., Gooding, Idaho
Olinghouse, Pam, Little Rock, Ark.
Oliver, John H., St. Augustine, Fla.
Oliver, Susanna N., Washington, D.C.
Ollie, B. Joan, Hampton, Va.
Olmedo, Stephanie K., Colorado Springs, Colo.
Olmsted, Donna L., Los Angeles, Calif.
Olsen, Gary W., Indianapolis, Ind.
Olsen, Jean A., Flint, Mich.
Olsen, Pam, Lake Ronkonkoma, N.Y.
Olson, Diane J., Riverside, Calif.
Olson, Harvey L., Omaha, Nebr.
Olson, Kathey D., Amarillo, Tex.
Olson, LeAnn, Greeley, Colo.
Olson, Lucile M., Delavan, Wis.
Olson, Mary G., Columbus, Ohio
Olson, Raymond, Sioux Falls, S. Dak.
Olsufka, Mary, Omaha, Nebr.
O'Malley, Ann R., Danville, Ky.
O'Mara, Sr. Maura, Buffalo, N.Y.
O'Neill, Judith L., Windsor, Conn.
O'Neill, Marlyn A., Champaign, Ill.
Onken, Patricia J., Jacksonville, Ill.
Opsahl, Harriet A., Riverside, Calif.
Opp, Louise, Jamestown, N. Dak.
O'Reilly, Alicia, Houston, Tex.
Orlando, Sandra A., Buffalo, N.Y.
O'Rourke, Betty, Frederick, Md.
O'Rourke, Frances, Buffalo, N.Y.
O'Rourke, Gail, Carbondale, Pa.
O'Rourke, Patricia, Fulton, Mo.
Orr, Agnes M., Ogden, Utah
Orr, Carol A., Kalona, Iowa
Ortiz, Cordelia, Los Angeles, Calif.
Osborn, Dorisanne W., Pittsburgh, Pa.
Osburn, Nona L., Wayzata, Minn.
Osgood, Joan A., Munice Ind.
O'Shea, Michael D., Morganton, N.C.
Oster, Mary A., Longmeadow, Mass.
Ottinger, Paula J., Washington, D.C.
Overlander, Caroline M., Rochester, N.Y.
Owens, Charles R., Wilson, N.C.
Owens, Florine W., Riverside, Calif.
Owens, Joy B., Wilson, N.C.
Owens, Julie A., Mesquite, Tex.
Owens, Michael, Baton Rouge, La.

Owens, Vera, Cave Spring, Ga.
Oxendine, Karen, Morganton, N.C.

P

Paarlberg, Betsy, Homewood, Ill.
Pack, Judy D., Spartanburg, S.C.
Padden, Agnes M., Washington, D.C.
Padden, Donald A., Washington, D.C.
Paetz, Ann M., Morganton, N.C.
Pahre, Patricia A., Pittsburgh, Pa.
Paine, Susan L., Tacoma, Wash.
Painter, A. Leon, Spartanburg, S.C.
Painter, Aubrey L., Staunton, Va.
Painter, Carroll C., Spartanburg, S.C.
Painter, Claire S., Berkeley, Calif.
Palade, Violet C., Lombard, Ill.
Palk, Anne, Geneseo, N.Y.
Palm, Victoria L., Tucson, Ariz.
Palmer, Carl M., Rochester, N.Y.
Palmer, Howard O., Jackson, Miss.
Palmquist, Warren R., Simi Valley, Calif.
Panara, Robert F., Rochester, N.Y.
Pancake, Virginia L., Romney, W. Va.
Panko, Joseph W., Rochester, N.Y.
Pankratz, Mary E., Santa Rosa, Calif.
Parker, Anna, Portland, Maine
Parker, Bonnie, Virgina Beach, Va.
Parker, Carlene W., Portland, Maine
Parker, Dovie, Sulphur, Okla.
Parker, Hampford, Knoxville, Tenn.
Parker, Mary, Owosso, Mich.
Parkins, Susan G., Fairfax, Va.
Parkinson, Pat, St. Augustine, Fla.
Parks, Fern, Olathe, Kans.
Parks, Lloyd R., Olathe, Kans.
Parks, Patricia K., St. Augustine, Fla.
Parks, Jr., Ray S., St. Augustine, Fla.
Parris, Jr., Marion L., Wilson, N.C.
Parrish, Horace, Cave Spring, Ga.
Pask, Pauline H., Rochester, N.Y.
Pass, Ettalee S., Rochester, N.Y.
Passafiume, Lynda, Tucson, Ariz.
Patterson, Catherine E., W. Trenton, N.J.
Patterson, Dorothy, Olathe, Kans.
Patterson, Lola W., Hampton, Va.
Patterson, Ramelle F., Louisville, Ky.
Pattie, Helen T., Danville, Ky.
Patton, Jr., Charles, Los Angeles, Calif.
Patton, Mary C., Morganton, N.C.
Paul, James B., Pittsburgh, Pa.
Paul, Jeanne, Riverside, Calif.
Paullin, John H., Riverside, Calif.
Pawlikowski, Marti M., Chicago, Ill.
Payne, Ann, Knoxville, Tenn.
Payne, Donna A., Danville, Ky.
Payne, Patsy Jo, Santa Fe, N. Mex.
Payne, Shirley, Fulton, Mo.
Peak, Doyle, Sulphur, Okla.
Peak, Joseph J., Eureka, Calif.
Pearce, Virginia L., Wilson, N.C.
Peck, Billy J., Salem, Oreg.
Pellicci, Luzio, White Plains, N.Y.
Peltier, Edward F., Danville, Ky.
Pennella, Louis J., Buffalo, N.Y.
Penny, Penelope S., Cave Spring, Ga.
Perdue, Eugene, Cave Spring, Ga.
Perez, Carrie S., San Antonio, Tex.
Perlmutter, Miles B., Compton, Calif.
Perotti, Nancy A., Colorado Springs, Colo.
Perpich, Ruth L., St. Augustine, Fla.
Perri, Betti Jo, Muncie, Ind.
Persinger, John E., Newark, Del.
Peters, Bryanne G., Wilson, N.C.
Peters, Vernice H., Riverside, Calif.
Petersen, Frances D., Newark, Del.
Petersen, Lawrence L., Seattle, Wash.
Petersen, Marlene F., Lincoln, Nebr.
Peterson, Barbara, Sioux Falls, S. Dak.
Peterson, Barbara R., Moline, Ill.
Peterson, David R., Berkeley, Calif.
Peterson, E. Barbara, Seattle, Wash.
Peterson, Gerald A., Riverside, Calif.
Peterson, Lucy C., Morganton, N.C.
Peterson, Paul C., Rochester, N.Y.
Peterson, Rosamond, Rochester, N.Y.
Peterson, Shirley, Gooding, Idaho
Petitti, Gigi, Sulphur, Okla.
Petrone, Angela J., Tuxedo, Manitoba, Canada
Petrone, Elmer M., Norristown, Pa.
Pettingill, Don G., Washington, D.C.
Petty, Phyllis T., Spartanburg, S.C.
Pezel, Bonnie L., Berkeley, Calif.
Pfau, Glenn F., Washington, D.C.
Pflaster, Gail, New York, N.Y.
Pflaum, Michael E., San Diego, Calif.
Phillips, Ben S., Baton Rouge, La.
Phillips, Delana, Wilson, N.C.
Phillips, Eleanor C., China Lake, Calif.
Phillips, Frances, Upper Montclair, N.J.
Phillips, Mary A., Buffalo, N.Y.
Phillips, Mike, Little Rock, Ark.
Phillips, Patricia J., Chickasha, Okla.
Phillips, Richard M., Washington, D.C.
Piazza, Karen M., Raleigh, N.C.
Piccolino, Joseph R., Albany, N.Y.
Pidcock, Barry D., Jacksonville, Ill.
Pieper, Deborah, Urbana, Ill.
Pierce, Carlene W., Newark, N.J.
Pierce, Gail S., Lincolnwood, Ill.
Pierson, Kay H., Baltimore, Md.
Pieslak, Mary M., W. Trenton, N.J.
Pihl, Linda R., Houston, Tex.
Pike, Bonnie B., Wilson, N.C.
Pike, Patricia S., Talladega, Ala.
Pilar, Janet, Flint, Mich.
Pilsums, Leonids, Staunton, Va.
Pino, Jacob F., San Antonio, Tex.
Pinzur, Maxine D., Philadelphia, Pa.
Plant, Judith, Fairfax, Va.
Plausky, Sr. Jean M., Randolph, Mass.
Playter, Phyllis, St. Augustine, Fla.
Plummer, Donald M., Winnipeg, Manitoba, Canada
Plummer, Richard L., Riverside, Calif.
Podbielski, Judith A., Trenton, N.J.
Podsiadlo, Francis T., Buffalo, N.Y.

Pohlman, Barbara V., Champaign-Urbana, Ill.
Polakoff, Dorothy P., Washington, D.C.
Pollard, Gerald, Champaign, Ill.
Polley, Janet S., Scranton, Pa.
Polumbo, Catherine A., Bloomsburg, Pa.
Ponczocha, June M., Detroit, Mich.
Pope, Eugene C., St. Augustine, Fla.
Poprycz, Patricia W., Hershey, Pa.
Porter, Dean A., Olathe, Kans.
Porter, Gerald G., Buffalo, N.Y.
Porter, Shirley, Ogden, Utah
Porter, Susan S., Little Rock, Ark.
Porter, Thomas A., Olathe, Kans.
Posey, Annie R., Spartanburg, S.C.
Potwin, Gail E., Berkeley, Calif.
Powell, Frank W., Dallas, Tex.
Powell, Gaynelle, Framingham, Mass.
Powell, Jane C., New Orleans, La.
Powell, Jean A., Pittsburgh, Pa.
Powers, Ann T., Mill Neck, N.Y.
Powers, Gerald W., Bloomsburg, Pa.
Pratt, Marjorie T., Rochester, N.Y.
Pratt, Robert D., Rochester, N.Y.
Prault, Lillijean, Normal, Ill.
Presher, Mildred, Little Rock, Ark.
Presnell, Lucille M., Atlanta, Ga.
Price, Joan G., Littleton, Colo.
Price, Lynne H., Frederick, Md.
Prickett, Hugh T., Westminster, Md.
Prince, Gayle S., Northridge, Calif.
Prince, Jean L., Berkeley, Calif.
Pritz, Jana L., Muncie, Ind.
Privitera, Paula R., Rochester, N.Y.
Proctor, Mrs. Dorsey E., Covina, Calif.
Proehl, Janet E., St. Paul, Minn.
Prokes, Jerry, St. Augustine, Fla.
Prokes, Linda, St. Augustine, Fla.
Pronovost, Wilbert L., Boston, Mass.
Propp, George, Lincoln, Nebr.
Provance, Ben F., Washington, D.C.
Pruden, Catherine W., W. Trenton, N.J.
Pruitt, Ann L., Lafayette, Ind.
Pruitt, Pat, Tacoma, Wash.
Pryor, Peggie, Morganton, N.C.
Puckett, Kathryn S., Frederick, Md.
Purnell, Richard E., Danville, Ky.
Puthoff Cynthia, Sioux Falls, S. Dak.
Puthoff Larry, Sioux Falls, S. Dak.
Putnam, Lee, Washington, D.C.
Pyle, David, Sulphur, Okla.
Pyle, Donna, Sulphur, Okla.

Q

Quay, Pamela J., Albuquerque, N. Mex.
Querio, Eileen O., Riverside, Calif.
Quick, Marian A., University Park, Pa.
Quigley, Bobbie E., Simi Valley, Calif.
Quigley, Kathy, Milton, Ontario, Canada
Quill, Leonora, Champaign, Ill.
Quinn, Bonnie A., Milwaukee, Wis.
Quinn, Carol P., Newcastle, Calif.
Quinsland, Larry K., Milwaukee, Wis.
Quintana, Linda L., Santa Fe, N. Mex.

R

Rabinowitz, Irvin M., Covington, Ga.
Rabinowitz, Linda G., Clarkston, Ga.
Raci, Donald B., Clarendon Hill, Ill.
Raci, Kathleen M., Berwyn, Ill.
Radvany, Charles A., Trenton, N.J.
Rager, Loree, Pittsburgh, Pa.
Ragoff, Ronnie E., Newark, N.J.
Ragsdale, Jo Anne, Beverly, Mass.
Raguseo, JoAnne, Sioux Falls, S. Dak.
Rahmlow, Howard H., Riverside, Calif.
Raichle, Margaret E., Seattle, Wash.
Raine, Lucy H., Danville, Ky.
Rainer, James, Sulphur, Okla.
Rainer, Linda, Sulphur, Okla.
Raines, Beverly J., Canyon Country, Calif.
Ramborger, Camilla A., Spartanburg, S.C.
Ramborger, William J., Spartanburg, S.C.
Ramsey, V. Kaye, Omaha, Nebr.
Randall, Clemontine Y., Tucson, Ariz.
Randall, Darrel D., Austin, Tex.
Randall, Elizabeth F., Knoxville, Tenn.
Randall, Kenneth D., St. Augustine, Fl[illegible]
Rank, Arvilla C., Milwaukee, Wis.
Ransdell, William E., Little Rock, Ark.
Ransom, D. Glenyce, Glendora, Calif.
Rapier, Mary K., Lubbock, Tex.
Rathe, Sharon K., Rock Valley, Iowa
Ratner, Valerie M., Lake Ronkonkoma, N.Y.
Rattray, Phyllis, Salem, Oreg.
Rau, Carol A., Olathe, Kans.
Rausin, Dorinda K., Cave Spring, Ga.
Ravn, Alden C., Jacksonville, Ill.
Ravn, Caroline T., Jacksonville, Ill.
Ray, Eliza J., Wilson, N.C.
Ray, J. Hubert, Talladega, Ala.
Ray, Max, Baton Rouge, La.
Raybould, Marilyn L., Tucson, Ariz.
Raymer, II, John M., Rochester, N.Y.
Raymond, Linda, Covina, Calif.
Raymond, Suzanne H., Newark, Del.
Read, Lois, Portland, Oreg.
Ready, Cleve, Fulton, Mo.
Reay, Edward W., Gooding, Idaho
Rebok, Helen R., W. Hartford, Conn.
Records, Lynn E., Santa Ana, Calif.
Recotta, Patricia E., Rochester, N.Y.
Redell, Dianna L., Rochester, N.Y.
Redfern, Kathryn B., Wilmington, N.C.
Redwine, Emily H., Atlanta, Ga.
Reece, Norma L., Delavan, Wis.
Reed, Hilma, Little Rock, Ark.
Reed, Lois M., Rochester, N.Y.
Reed, Marthada, Fulton, Mo.
Reed, Melva, Knoxville, Tenn.
Reed, Richard, Fulton, Mo.
Reed, Vashti Ann, San Diego, Calif.
Reelfs, Brenda, Council Bluffs, Iowa

Reese, Janice T., Scranton, Pa.
Reeve, Mark, Detroit, Mich.
Reeves, Jr., Clarence E., Brownsville, Tex.
Reeves, Harriet E., Spartanburg, S.C.
Reeves, Louis, Winnipeg, Manitoba, Canada
Reeves, Nona W., Winston-Salem, N.C.
Regan, Lynn, Toms River, N.J.
Rehrig, Caroline D., Philadelphia, Pa.
Reich, Erica S., Panama City, Fla.
Reicher, Janice S., Los Angeles, Calif.
Reidelberger, Eleanor, St. Augustine, Fla.
Reidelberg, Henry J., St. Augustine, Fla.
Reilly, Mickey, Omaha, Nebr.
Reitz, Jr., Edward, Omaha, Nebr.
Reitz, Patty, Omaha, Nebr.
Rembe, Raymond R., Baltimore, Md.
Rembert, Willa R., Columbia, S.C.
Rentzel, Jere R., Rochester, N.Y.
Repass, Jan, Portland, Maine
Resnick, Libby, New York, N.Y.
Reuck, Blanche M., Jacksonville, Ill.
Reynolds, Horace N., Washington, D.C.
Reynolds, James L., Spartanburg, S.C.
Reynolds, Wilmer E., Washington, D.C.
Rhoades, Ellen A., Atlanta, Ga.
Rhoades, Sidney E., Colorado Springs, Colo.
Rhodes, Margaret F., Asheville, N.C.
Rial, Rita K., Fayetteville, Ark.
Riale, Robert C., Wilmington, Del.
Rice, Amy M., Tulsa, Okla.
Rice, Dorothy W., St. Augustine, Fla.
Rice, Ferne, Salem, Oreg.
Rice, Geraldine T., Omaha, Nebr.
Rice, Glen, Fulton, Mo.
Rice, Pat, Faribault, Minn.
Rice, Sabra, Fulton, Mo.
Rice, Vivian E., Washington, D.C.
Richards, Ann, Clarkston, Ga.
Richardson, Gertrude A., Jackson, Miss.
Richardson, Ruth L., Vancouver, Wash.
Richey, Hilda J., Delavan, Wis.
Rieger, Clifford, Milwaukee, Wis.
Riekehof, Lottie L., Washington, D.C.
Ries, Marsha M., Romney, W. Va.
Riggs, Barbara L., Washington, D.C.
Rigor, Nancy L., Santa Cruz, Calif.
Riley, Judith A., Baltimore, Md.
Rinaldi, AnnaMaria D., Salem, Oreg.
Ringer, Sr. Miriam Theresa, Randolph, Mass.
Ripley, Sr. Gail A., Randolph, Mass.
Ripley, Peter H., Morganton, N.C.
Rislov, Kenneth L., DeKalb, Ill.
Risner, Ellen W., Atlanta, Ga.
Ritchie, Katheryn A., White Plains, N.Y.
Ritter, Kathryn, Kansas City, Kans.
Ritter, Susan H., Emporia, Kans.
Roach, Robert E., Birmingham, Ala.
Roake, Shermalee F., Salem, Oreg.
Robbins, Curtis, Rochester, N.Y.
Robbins, Nancy V., Watertown, Mass.
Roberts, Ann E., Jackson, Miss.
Roberts, Carl P., Sulphur, Okla.
Roberts, Earl, Thibodaux, La.
Robertson, MaryAnn, Bronx, N.Y.
Robertson, Pearl, Winnipeg, Manitoba, Canada
Robillard, John A., Lawrence, Mass.
Robinson, Carol A., W. Hartford, Conn.
Robinson, Christopher F., Washington, D.C.
Robinson, Janet R., Tecumseh, Mich.
Robinson, Marie L., Jackson, Miss.
Rochester, Sam, Pittsburgh, Pa.
Rockwell, Sybil S., Milwaukee, Wis.
Rocque, Janet L., Evergreen Park, Ill.
Rodriguez, Joseph, Pueblo, Colo.
Rodriguez, Ramon F., Washington, D.C.
Roe, Susan S., Little Rock, Ark.
Roeder, Jean T., Buffalo, N.Y.
Roesch, Irvin H., Moscow, Idaho
Roger, Alice, Cave Spring, Ga.
Rogers, Bonnie J., Baytown, Tex.
Rogerson, Mrs. Michal S., Wilson, N.C.
Rood, Marvin S., Romney, W. Va.
Root, Debra J., Dayton, Ohio
Roper, Jennie M., Morganton, N.C.
Rose, Donald F., Lansdale, Pa.
Rose, J. Martin, Amherst, Nova Scotia, Canada
Roseberry-Grange, Anne, Portland, Maine
Rosen, Roslyn, Washington, D.C.
Rosenberg, Paul M., Downey, Calif.
Rosenberg, Paula L., Charlottesville, Va.
Rosenberg, Sandy A., Philadelphia, Pa.
Rosenbloom, Betty W., Washington, D.C.
Rosenthal, Elizabeth E., Watertown, Mass.
Rosenzweig, Ethel, Agana, Guam
Rosenzweig, Phyllis, Lake Ronkonkoma, N.Y.
Rosica, Sebastian J., Buffalo, N.Y.
Ross, Carol, Knoxville, Tenn.
Ross, Linda Jane, Olathe, Kans.
Rossi, Sandra L., Pittsburgh, Pa.
Roth, John, Sioux Falls, S. Dak.
Roth, Penny A., Bedford, Va.
Roth, Stanley D., Olathe, Kans.
Rotter, Paul, Jackson Heights, N.Y.
Rounds, H. L. Peter, Riverside, Calif.
Roussos, Kathleen, Vancouver, Wash.
Rowan, Mary A., Washington, D.C.
Rowe, Linda J., Los Angeles, Calif.
Rowen, Annelle, Portland, Maine
Royall, Jr., H. G., Raleigh, N.C.
Royster, Margaret W., Danville, Ky.
Rudy, Les H., Riverside, Calif.
Rugg, Phyllis H., Washington, D.C.
Ruhlmann, Audrey, New York, N.Y.
Ruiz, Margaret A., Washington, D.C.
Rukavina, Kathryn D., Pittsburgh, Pa.
Rundlett, Judith A., Simi Valley, Calif.
Runyan, Linda, Sulphur, Okla.
Runzo, David F., Rochester, N.Y.

Rupelt, Karen S., LaGrange Park, Ill.
Ruschival, Mary L., St. Augustine, Fla.
Rushing, Carol, St. Augustine, Fla.
Russ, Karen W., Newark, N.J.
Russell, Carolyn L., Morganton, N.C.
Russell, Dennis P., Washington, D.C.
Russell, Julie L., Morganton, N.C.
Russell, M. Joyer, St. Augustine, Fla.
Russo, Joanne, Lodi, N.J.
Russo, Kathleen M., Washington, D.C.
Russo, Rocco P., Rochester, N.Y.
Rutherford, Todd B., Riverside, Calif.
Ryan, Gail R., White Plains, N.Y.
Ryan, Sr. Margaret V., Randolph, Mass.
Ryan, Mary L., Pasadena, Calif.
Rynearson, Rev. Rodney R., Detroit, Mich.
Ryterske, Donna M., Ft. Leonard Wood, Mo.

S

Sacco, Beverly N., Rochester, N.Y.
Sachs, Marvin, Rochester, N.Y.
Sadnavitch, Theresa, Little Rock, Ark.
Saffa, Joyce, Fulton, Mo.
St. Esther, Sr., Philadelphia, Pa.
St. John, A. Warner, St. Augustine, Fla.
Sakamoto, Susan J., Berkeley, Calif.
Sakshaug, Nancy B., San Jose, Calif.
Sale, Elizabeth A., Washington, D.C.
Salem, James M., Pittsburgh, Pa.
Salerno, Sandra, Bronx, N.Y.
Sales, Marjorie, Sulphur, Okla.
Salade, Phyllis A., Tampa, Fla.
Sallop, Marvin B., Houston, Tex.
Saltelli, Donna V., Frederick, Md.
Salter, Marilyn B., Champaign, Ill.
Salz, Ida L., Miami, Fla.
Samelian, Gloria, St. Cloud, Minn.
Sams, Jane E., Fort Wayne, Ind.
Sanborn, Marie L., Cumberland, Wis.
Sanchez, Aurelio E., Santa Fe, N. Mex.
Sanders, Mrs. Lee, Knoxville, Tenn.
Sanders, Patricia, Anchorage, Alaska
Sanford, Judith A., Mill Neck, N.Y.
Sanford, Sharon L., Rochester, N.Y.
Santillanes, Vinona K., Woodland Hills, Calif.
Sapko, Ada M., Pittsburgh, Pa.
Sarapata, Susan L., Gurnee, Ill.
Sartain, John R., Talladega, Ala.
Sass, Ron, St. Augustine, Fla.
Sasser, Elizabeth M., Morganton, N.C.
Sauer, Nan, Knoxville, Tenn.
Saults, Hope, Sulphur, Okla.
Saunders, Erva M., Washington, D.C.
Saunders, Martha M., Morganton, N.C.
Saxe, Beulah F., Delavan, Wis.
Saxon, Mildred R., Rochester, N.Y.
Scalise, Mary B., New York, N.Y.
Scarborough, Alice W., Tuscaloosa, Ala.
Schaberl, Edward J., Youngstown, Ohio
Schaefer, Kathy, Cumberland, Wis.
Schaer, Nancy A., Danville, Ky.
Schatz, Virginia W., Pittsburgh, Pa.
Scheffel, Robert E., Morganton, N.C.
Schelert, Lily C., Morganton, N.C.
Scheppach, Jeanette M., Colorado Springs, Colo.
Scheppach, Van K., Colorado Springs, Colo.
Scherer, Patricia A., Evanston, Ill.
Scheringer, Antonia, St. Paul, Minn.
Scherker, Dorothy, Miami, Fla.
Schickler, Catherine M., Skokie, Ill.
Schieber, Mary T., Scranton, Pa.
Schielke, Alfred E., W. Trenton, N.J
Schilling, Julie, Portland, Maine
Schiltz, Ken A., Tucson, Ariz.
Schimmel, Connie S., San Francisco, Calif.
Schirmer, Barbara R., Mansfield, Mass.
Schmidt, Burton, S., Riverside, Calif.
Schmitt, Margaret A., Sheboygan, Wis.
Schmitt, Phillip J., Washington, D.C.
Schmitt, Robert J., Berkeley, Calif.
Schmitz, Brenda K., Olathe, Kans.
Schneider, Joan T. Lake Ronkonkoma, N.Y.
Schoeffield, Jr., William J., Lake Ronkonkoma, N.Y.
Schoenmann, Susan T., Riverside, Calif.
Scholtz, Virginia C., Danville, Ky.
Schoolcraft, Mary, Gooding, Idaho
Schoonmaker, Jill B., Manchester, N.H.
Schoppert, Thelma, Frederick, Md.
Schorsch, Stephen W., Darien, Ill.
Schowe, Jr., Ben M., Washington, D.C.
Schrautemeier, Janice S., St. Louis, Mo.
Schreiber, Joanne, Geneseo, N.Y.
Schuch, Brenda J., Clarkston, Ga.
Schuchman, John S., Washington, D.C.
Schultz, Ervin, Faribault, Minn.
Schultz, Jean S., Washington, D.C.
Schultz, Rochelle, Rochester, N.Y.
Schulze, Kim, Lubbock, Tex.
Schunhoff, Hugo F., Berkeley, Calif.
Schwab, Warren A., Framingham, Mass.
Schwadron, Deborah R., Brooklyn, N.Y.
Schwarting, Guy, Hickory, N.C.
Schwartz, Katherine F., Frederick, Md.
Schwartz, Sharon M., Chicago, Ill.
Schwartzman, Solomon, Pittsburgh, Pa.
Schwarz, Doris E., Washington, D.C.
Schwebach, Rhinella D., Eau Claire, Wis.
Schweitzer, Robert W., Detroit, Mich.
Sciarretta, Janice B., Concord, Mass.
Scofield, Harry H., Rochester, N.Y.
Scofield, Patricia, Rochester, N.Y
Scott, Edith D., Atlanta, Ga.
Scott, Edward W., Jacksonville, Ill.
Scott, Elsie B., Baltimore, Md.
Scott, Fannye, Cave Spring, Ga.
Scott, Juanita H., Hampton, Va.
Scott, Melissa R., Dallas, Tex.
Scott, Myrle K., New York, N.Y.
Scott, Susan C., Morganton, N.C.

Scouten, Edward L., Rochester, N.Y.
Scouten, Eleanor, Rochester, N.Y.
Scozzari, Salvatore J., White Plains, N.Y.
Scribner, Robert W., Frederick, Md.
Scroggs, Carolyn L., Seattle, Wash.
Seaborn, Marlene W., N. Charleston, S.C.
Seals, Rosie B., Jackson, Miss.
Seaman, Imogene W., W. Trenton, N.J.
Seawright, Judy P., Little Rock, Ark.
Sechrist, C., Las Vegas, Nev.
Seeger, Julius P., Austin, Tex.
Seeger, Lawrence, Wilson, N.C.
Seiders, Nancy, Sioux Falls, S. Dak.
Seiler, Peter J., Darien, Ill.
Selevan, L. Rachelle, Brooklyn, N.Y.
Selkowitz, Scott J., University Park, Pa.
Sellards, Linda K., Shreveport, La.
Sellers, Kay E., Indianapolis, Ind.
Sellner, Hubert J., Berkeley, Calif.
Sendelbaugh, Joseph W., DeKalb, Ill.
Sendler, Carolyn P., Rome, N.Y.
Senter, Ruth E., Omaha, Nebr.
Serafin, Stanley, Yakima, Wash.
Sessler, Charles H., Indianapolis, Ind.
Setzer, Carolyn L., Hickory, N.C.
Severance, Dorothy E., Gooding, Idaho
Sevilla, Ofelia, St. Augustine, Fla.
Sewell, Helen R., Austin, Tex.
Seymour, Miriam T., Seattle, Wash.
Shaddix, Callie H., Talladega, Ala.
Shadoin, Laura M., Norfolk, Va.
Shahan, Polly, Washington, D.C.
Shallin, Joan B., Washington, D.C.
Shane, Timothy M., Morganton, N.C.
Shannon, Nora B., Rochester, N.Y.
Shea, Helen M., Charlottesville, Va.
Shearer, II, Howard W., Olathe, Kans.
Sheehan, Edna R., Philadelphia, Pa.
Sheehy, Patti J., Denver, Colo.
Sheeley, Eugene C., University, Ala.
Sheie, Timothy P., Goshen, N.Y.
Shell, Astrid, Knoxville, Tenn.
Shellgrain, Evelyn M., Berkeley, Calif.
Shenault, Alexandria R., Jackson, Miss.
Shenault, John W., Jackson, Miss.
Shepard, Charlotte H., Salem, Oreg.
Shepherd, Linda, Bloomsburg, Pa.
Sheridan, E. Donald, Vancouver, Wash.
Sherman, Jill S., Rockville Centre, N.Y.
Sherrill, Wilson W., Morganton, N.C.
Sherry, Francilla A., Philadelphia, Pa.
Shimko, Susan, Bloomsburg, Pa.
Shinpaugh, Joe R., Staunton, Va.
Shipley, Jean, Gooding, Idaho
Shipman, Eldon, Fulton, Mo.
Shipman, John S., Delavan, Wis.
Shipp, Kathryn T., Burlington, Iowa
Shippey, Janis N., Dallas, Tex.
Shirts, Robin P., Seattle, Wash.
Shore, Irvin, St. Louis, Mo.
Shore, Martha L., Hickory, N.C.
Short, Dorothy B., Spartanburg, S.C.
Shotwell, Clayton M., Colorado Springs, Colo.
Shouse, William R., Jacksonville, Ill.
Shreve, Anne R., St. Augustine, Fla.
Shrum, Susan D., Pocatello, Idaho
Shuey, Herbert, Olathe, Kans.
Shults, Judith K., Clarkston, Ga.
Shutsky, Fay, Washington, D.C.
Siders, Jerry L., Omaha, Nebr.
Siders, Judith C., Omaha, Nebr.
Sides, Alma B., Morganton, N.C.
Siegelstein, Natalie J., Bronx, N.Y.
Sielaff, Esther E., Battle Creek, Mich.
Sielaff, Jeanne E., Raleigh, N.C.
Siger, Leonard P., Baltimore, Md.
Silbernagle, Mary Jo, Santa Maria, Calif.
Silberstein, Joel M., Spartanburg, S.C.
Silver, Rawley A., New Rochelle, N.Y.
Silverman, S. Richard, St. Louis, Mo.
Simmons, Ida M., Rochester, N.Y.
Simmons, Maureen E., Buffalo, N.Y.
Simmons, M. Patricia, Los Angeles, Calif.
Simmons, Sandra L., Wilson, N.C.
Simmons-Martin, Audrey A., St. Louis, Mo.
Simonalle, Virginia M., Carmichael, Calif.
Simpson, LouAnn B., Newark, Del.
Simpson, Nancy D., Bryan, Tex.
Simpson, William M., Alhambra, Calif.
Sims, Faye, Talladega, Ala.
Sims, Nathan E., Colorado Springs, Colo.
Sinclair, Deborah L., Phoenix, Ariz.
Sinclair, Wayne, Frederick, Md.
Singleton, Julian S., Salem, Oreg.
Sins, Valerie A., Pittsburgh, Pa.
Siscel, James T., Phoenix, Ariz.
Sisco, Frankie J., St. Augustine, Fla.
Sitar, Magdalene W., Romney, W. Va.
Skalka, Evelyn C., Washington, D.C.
Skinner, Shirley, Fayetteville, Ark.
Sklar, Kenneth P., Philadelphia, Pa.
Skolnick, Ellen M., New York, N.Y.
Slack, Ellen C., San Diego, Calif.
Slade, Elwin B., Tucson, Ariz.
Sladek, Frank E., Tucson, Ariz.
Slan, Linda C., Potomac, Md.
Slater, Michael F., St. Augustine, Fla.
Slater, Michael W., St. Augustine, Fla.
Slater, Nancy, St. Augustine, Fla.
Slater, Rita L., St. Augustine, Fla.
Slemenda, Jr., John C., Pittsburgh, Pa.
Silke, Samuel B., Scranton, Pa.
Sloboda, William P., Washington, D.C.
Sluck, Patricia M., Scranton, Pa.

Sluppick, Juanita J., Washington, D.C.
Smallwood, Dorothy B., Riverside, Calif.
Smith, Alberta, Knoxville, Tenn.
Smith, Alice W., Morganton, N.C.
Smith, Andrea M., Santa Fe, N. Mex.
Smith, Anne, Sulphur, Okla.
Smith, Barbara G., Baltimore, Md.
Smith, Bernard E., Rochester, N.Y.
Smith, Beverly C., W. Trenton, N.J.
Smith, Carol A., Pittsfield, Mass.
Smith, Carolyn B., St. Augustine, Fla.
Smith, Cathie A., Batavia, N.Y.
Smith, Charlotte P., Dallas, Tex.
Smith, Christine, Milwaukee, Wis.
Smith, Constance M., Jackson, Miss.
Smith, Dorothy L., St. Augustine, Fla.
Smith, Frieda A., Boulder, Colo.
Smith, Frieda R., Talladega, Ala.
Smith, Helen L., Las Vegas, Nev.
Smith, Jess M., Indianapolis, Ind.
Smith, Jewel, Sulphur, Okla.
Smith, Kristine T., St. Augustine, Fla.
Smith, Laura E., Morganton, N.C.
Smith, Lois Jean, Greenville, S.C.
Smith, Lucrece B., Wilson, N.C.
Smith, Marilyn, Washington, D.C.
Smith, Martha M., Alexandria, Va.
Smith, Mary L., Pontiac, Mich.
Smith, Mavis, Sulphur, Okla.
Smith, Br. Michael F., Brooklyn, N.Y.
Smith, M. Wanda, Baton Rouge, La.
Smith, Nancy, Philadelphia, Pa.
Smith, Patsy R., Knoxville, Tenn.
Smith, Rebecca B., Westminster, Md.
Smith, Sheridan A., Washington, D.C.
Smith, Sherrilyn W., Atlanta, Ga.
Smith, Stanley, Berkeley, Calif.
Smith, Susan, Goshen, Ind.
Smith, Susan G., Riverside, Calif.
Smith, Valerie L., Lake Charles, La.
Smits, Ausma, Washington, D.C.
Smolinski, Lucille C., LaGrange Park, Ill.
Smrz, Richard F., Romney, W. Va.
Snelbaker, Nancy L., Danville, Ky.
Snell, Joy, Alhambra, Calif.
Snyder, Harriett C., Pittsburgh, Pa.
Socha, Gretchen F., Arlington Heights, Ill.
Soehner, Michael J., Buffalo, N.Y.
Sokolowski, Carole A., W. Trenton, N.J.
Solano, Sr. Frances, Brooklyn, N.Y.
Solko, Sandra S., Olathe, Kans.
Solomon, Judith C., White Plains, N.Y.
Somers, Wanda C., Norfolk, Va.
Sommer, Clarence, Faribault, Minn.
Sommer, Elizabeth, Faribault, Minn.
Sorenson, Brenda S., Alhambra, Calif.
Soto, Martha L., Tucson, Ariz.
Souceliase, Gloria, St. Cloud, Minn.
Sowell, Luda B., Riverside, Calif.
Sowers, Charley F., Morganton, N.C.
Spaneas, Irene M., Westminster, Md.
Spangler, Charlotte A., Scottdale, Ga.
Sparks, Jr., Fred L., W. Hartford, Conn.
Sparks, Hazelene C., West Hartford, Conn.
Spellman, John F., Providence, R.I.
Spence, Howard B., Amherst, N.S., Canada
Spencer, Rita A., Frederick, Md.
Speranza, Kitty, Omaha, Nebr.
Sperr, Louise T., Downey, Calif.
Sperstad, Bert E., Detroit, Mich.
Spicer, Gloria J., Scranton, Pa.
Spicer, Richard J., Agana, Guam
Spidal, David A., White Plains, N.Y.
Spinks, Vickie L., Romney, W. Va.
Spitzner, Alice E., Millburn, N.J.
Spitznogle, Marceil L., Salem, Oreg.
Spivey, Jeffrey B., Wilson, N.C.
Spizzirri, Julius C., Torrance, Calif.
Spraberry, Sherry L., Lubbock, Tex.
Sprawls, Pamela R., Shreveport, La.
Sprinkle, Teresa G., Danville, Ky.
Stack, Albert, Olathe, Kans.
Stack, Archie G., Vancouver, Wash.
Stack, Marianne E., Vancouver, Wash.
Staddon, Janet, W. Trenton, N.J.
Staehle, Jack M., White Plains, N.Y.
Stagg, Carole B., Raleigh, N.C.
Stagliano, Michel A., Milwaukee, Wis.
Stahura, Joseph L., York, Pa.
Stallings, Gordon W., Merced, Calif.
Stambaugh, Eileen P., Frederick, Md.
Stamps, Anna S., Morganton, N.C.
Stamps, Sr. Harlteen, Morganton, N.C.
Standley, C. Joseph, Jacksonville, Ill.
Stanek, Kenneth A., Buffalo, N.Y.
Stanfield, Kathleen L., Jacksonville, Ill.
Stanfill, Lester C., Indianapolis, Ind.
Stangarone, James E., Rochester, N.Y.
Stansberry, David, Buffalo, N.Y.
Stanton, Ruth E., Vancouver, Wash.
Stark, Billy, Jacksonville, Fla.
Starmer, Gwen J., Olathe, Kans.
Stattner, Carolyn L., Riverside, Calif.
Stayer, Leslie E., Danville, Ky.
Stearns, Dorothy H., Laurel, Md.
Stecker, Etta S., Los Alamitos, Calif.
Stedt, Joe D., Los Angeles, Calif.
Steedman, Morda L., Phoenix, Ariz.
Steege, Susan, Olathe, Kans.
Steele, Jr., Alvin E., Cave Spring, Ga.
Steele, Debbi K., Riverside, Calif.
Steele, Janie N., Cave Spring, Ga.
Steele, Margaret A., Morganton, N.C.
Steenberge, Sarah T., Dayton, Ohio
Steffey, Mary V., Staunton, Va.
Stehman, Jean M., Alexandria, Va.
Steigerwald, Ileene P., Riverside, Calif.
Stein, Shirley P., Washington, D.C.
Steinmueller, Cara A., Detroit, Mich.
Stejskal, Melody, Champaign, Ill.
Stelle, Richard R., White Plains, N.Y.
Stelle, Roy M., White Plains, N.Y.
Stephan, Joan H., St. Paul, Minn.
Stephens, Joann B., Normal, Ill.

Stephenson, Carl M., Riverside, Calif.
Stepp, Geverna, Cave Spring, Ga.
Stepp, Jr., Robert E., Lincoln, Nebr.
Sterk, Barbara D., Virginia Beach, Va.
Stern, Jo Fay, St. Augustine, Fla.
Stern, Robert C., St. Augustine, Fla.
Stern, Ronald J., Riverside, Calif.
Stern, Virginia W., Jackson Heights, N.Y.
Stetson, II, Roland M., St. Augustine, Fla.
Steven, Flora M., Buffalo, N.Y.
Stevens, Barbara C., Washington, D.C.
Stevens, Linda S., Little Rock, Ark.
Stevens, Raymond P., Syracuse, N.Y.
Stevens, Ruth, Rochester, N.Y.
Stevens, William E., Washington, D.C.
Stevenson, David D., St. Augustine, Fla.
Stevenson, Virginia L., Tucson, Ariz.
Stevenson, Vivian M., East Lansing, Mich.
Stewart, Gerald W., Knoxville, Tenn.
Stewart, Jacie, Houston, Tex.
Stewart, Robert C., Pittsburgh, Pa.
Stewart, V. John, Portland, Maine
Stinson, William, Sulphur, Okla.
Stites, Paula, Clarkston, Ga.
Stocker, Richard G., Tuscaloosa, Ala.
Stoefen, Jill M., Lincoln, Nebr.
Stokes, Alice, Logan, Utah
Stokesbary, Glenn E., Vancouver, Wash.
Stokesbary, Jean B., Vancouver, Wash.
Stoltz, Mary G., Columbus, Ohio
Stone, Carol S., Wilson, N.C.
Stone, Pauline M., Jackson, Miss.
Storey, Marilyn M., Dallas, Tex.
Stott, Grant, Ottahuhn, New Zealand
Strange, Arsena R., Washington, D.C.
Strasser, Barbara M., White Plains, N.Y.
Straszewski, Lorraine J., Shorewood, Wis.
Stream, Richard W., Galveston, Tex.
Stringfield, Maude W., Little Rock, Ark.
Strong, Ernest C., Bakersfield, Calif.
Stroud, George H., St. Augustine, Fla.
Stroud, Thelma, Sulphur, Okla.
Stuckless, E. Ross, Rochester, N.Y.
Sturgeon, Ron C., Vancouver, Wash.
Subtelny, Joanne D., Rochester, N.Y.
Sucharski, Paul J., Delavan, Wis.
Sullivan, Clare H., St. Augustine, Fla.
Sullivan, Sr. Declan, Randolph, Mass.
Sullivan, Elizabeth S., Austin, Tex.
Sullivan, •Estelle, Portland, Maine
Sullivan, Gerald, Riverside, Calif.
Sullivan, Linda L., Dallas, Tex.
Sulser, Barbara J., Jackson, Miss.
Sussman, Allen E., Washington, D.C.
Suter, Elizabeth A., New Haven, Conn.
Sutter, Elaine C., Vancouver, Wash.
Suveges, Penny J., Santa Ana, Calif.
Svoboda, Mary H., Olathe, Kans.
Swaim, Anna L., Berkeley, Calif.
Swaim, William D., Berkeley, Calif.
Swanson, Rebecca A., Hickory, N.C.
Swartzendruber, Mary L., Rochester, N.Y.
Sweeney, Mary Lou, Rome, N.Y.
Swietek, Sharon L., Windsor, Conn.
Swift, Carol S., Pittsburgh, Pa.
Swift, Peggy, Seabrook, Md.
Swigart, Frances B., Milwaukee, Wis.
Swinney, Lonna G., Dallas, Tex.
Sydnor, Jacqueline, Hampton, Va.
Szuba, Jennie M., Buffalo, N.Y.
Szymanski, Mary F., Buffalo, N.Y.

T

Taconis, Linda D., Kansas City, Mo.
Takemori, Wendy, Sulphur, Okla.
Talbot, Elaine M., Mountlake Terrace, Wash.
Talcove, Arlene J., Pittsfield, Pa.
Tallet, Sharon H., Rochester, N.Y.
Teneff, Samuel S., Buffalo, N.Y.
Tarins, Jack B., White Plains, N.Y.
Tarter, Gwendolyn M., Baltimore, Md.
Taskër, Vivian, Normal, Ill.
Tassin, Marie L., Spartanburg, S.C.
Tate, Olen, Talladega, Ala.
Tate, Rachel L., Jackson, Miss.
Tavender, Charles S., Jacksonville, Ill.
Taylor, Evelyn L., Knoxville, Tenn.
Taylor, Jane R., Morganton, N.C.
Taylor, Jerry R., Ogden, Utah
Taylor, Lela, Jackson, Miss.
Taylor, Leonard, Fulton, Mo.
Taylor, Lynda, Amarillo, Tex.
Taylor, Rebekah L., Wilson, N.C.
Taylor, Robert E., White Plains, N.Y.
Taylor, Velda L., Danville, Ky.
Teets, Beverly J., Salem, Oreg.
Teets, Royal S., Salem, Oreg.
Tegeder, Robert W., Ogden, Utah
Tellam, Joan C., Tucson, Ariz.
Tellam, William J., Tucson, Ariz.
Telleck, Miriam A., Pittsburgh, Pa.
Telleen, Christine C., San Francisco, Calif.
Tennis, C. Ann, Piedmont, Calif.
Tennis, Donaldina, Riverside, Calif.
Terry, Wayne S., St. Augustine, Fla.
Teske, Thomasine D., Milwaukee, Wis.
Testut, E. W., Chickasha, Okla.
Tetreault, Edward L., Compton, Calif.
Teuber, Hartmut, Claremont, N.H.
Teubner, Ronald R., Colorado Springs, Colo.
Teyker, Patricia A., West Long Branch, N.J.
Thaldorf, Alice H., St. Augustine, Fla.
Thayn, Paul H., Rochester, N.Y.
Theel, Charles F., Olathe, Kans.
Thiel, Jerilyn, Olathe, Kans.
Thiel, Linda L., New Haven, Conn.
Thomas, Ann C., Clarkston, Ga.
Thomas, Annie L., Jackson, Miss.
Thomas, Carol A., San Diego, Calif.
Thomas, Helen P., Fresno, Calif.
Thomas, Johnnie, Sulphur, Okla.

Thompson, Annette S., Romney, W. Va.
Thompson, Charles D., Romney W. Va.
Thompson, Dorothy, Sioux Falls, S. Dak.
Thompson, Elaine W., Hickory, N.C.
Thompson, Lowell A., Phoenix, Ariz.
Thompson, Marie S., Pittsburgh, Pa.
Thompson, Patricia A., Colorado Springs, Colo.
Thompson, Richard E., Watertown, Mass.
Thompson, Susan, San Antonio, Tex.
Thomson, Robert J., St. Augustine, Fla.
Thomson, RuthAnn, W. Trenton, N.J.
Thoreson, Margaret M., Vancouver, Wash.
Thorin, Dona, Sioux Falls, S. Dak.
Thornton, Elizabeth F., Colorado Springs, Colo.
Thornton, Linda L., Jackson, Miss.
Thornton, William A., Riverside, Calif.
Tiano, Michele A., Berkeley, Calif.
Tibble, Terry M., Normal, Ill.
Tiberio, Carmen S., St. Augustine, Fla.
Tiberio, Eloise B., St. Augustine, Fla.
Tidrick, Getha C., Yakima, Wash.
Tiffany, John T., St. Augustine, Fla.
Tiller, Olive M., Washington, D.C.
Timney, Irene I., Tucson, Ariz.
Tims, Martha, Olathe, Kans.
Tinsley, Christene E., Houston, Tex.
Titsworth, Elizabeth F., W. Trenton, N.J.
Titus, James R., Pittsburgh, Pa.
Titus, Susie H., Santa Ana, Calif.
Tobin, Margaret A., Newark, Del.
Todd, J. Andrew, Los Angeles, Calif.
Tolzin, Keith W., Anchorage, Alaska
Tomar, Nancy, Philadelphia, Pa.
Tomlinson, Arthur R., DeKalb, Ill.
Toner, Helen A., Riverside, Calif.
Toney, Betty, Rochester, N.Y.
Toole, Paul N., Salem, Oreg.
Tooley, Julie L., Raleigh, N.C.
Topping, Dorothy K., St. Louis, Mo.
Torr, Donald V., Washington, D.C.
Torrey, Judith, Westminster, Md.
Towle, Philip A., Greenfield, N.H.
Townley, Cathy, Chickasha, Okla.
Townsend, Nancy M., Romney, W. Va.
Townsley, Louis F., Washington, D.C.
Trabman, Bernice, Detroit, Mich.
Trachtenberg, Carol A., Setauket, N.Y.
Trachtenberg, Renee B., Elmont, N.Y.
Train, Alice J., Concord, N.H.
Trainor, Ruth F., Baldwinsville, N.Y.
Traxler, Stanley R., Seattle, Wash.
Traylor, Robert W., Council Bluffs, Iowa
Trbovevich, Goldie, Washington, D.C.
Treanor, Ruth D., Upper Marlboro, Md.
Treitel, Sherill A., Philadelphia, Pa.
Trevarthen, Marjorie G., Vancouver, Wash.
Triebert, Raymond F., W. Hartford, Conn.
Trigg, Carol, Dallas, Tex.
Trigueiro, Kenneth H., La Mesa, Calif.
Troiano, Ellen C., Pittsburgh, Pa.
Trott, Joan V., Edmonton, Alberta, Canada
Trower, Martha, Portland, Maine
Trujillo, Lydio T., Buffalo, N.Y.
Trybus, Raymond J., Washington, D.C.
Tubb, Sr. Lonnie L., Little Rock, Ariz.
Tucci, Mark A., W. Trenton, N.J.
Tucker, Jack, Sulphur, Okla.
Tucker, James L., Washington, D.C.
Tullos, Connie B., Jackson, Miss.
Tullos, Olouse A., Jackson, Miss.
Tully, Norman L., Washington, D.C.
Tuma, Sr., Richard W., Levittown, Pa.
Tunanidas, Irene, Youngstown, Ohio
Turadek, Brigidann L., Brooklyn, N.Y.
Turechek, Armin G., Tucson, Ariz.
Turk, Bernice G., Washington, D.C.
Turke, Nora M., Jacksonville, Ill.
Turley, Bruce E., Wilson, N.C.
Turner, Letisha A., Danville, Ky.
Turrou, Lana L., Grand Junction, Colo.
Tuttle, Bernice Q., Morganton, N.C.
Tuttle, Christina A., Doylestown, Pa.
Tweedie, David, Washington, D.C.
Twining, Ann B., Muncie, Ind.
Twining, J. Dean, Muncie, Ind.
Twyman, Connie B., Danville, Ky.
Tyberg, Thomas R., White Plains, N.Y.
Tyler, Rev. Bernard L., Chicago, Ill.

U

Uhrig, Elaine, Greeley, Colo.
Ullrich, Elizabeth P., Danville, Ky.
Underhill, Kathleen P., Morganton, N.C.
Underhill, Wanda, San Francisco, Calif.
Underwood, Lillian M., Indianapolis, Ind.
Ungar, Claire L., Oakland, Calif.
Unger, Amy, Washington, D.C.
Updike, Gary J., Olathe, Kans.
Utescher, Gayle, Scranton, Pa.
Utter, Leo, Seattle, Wash.

V

Vaccaro, Frances D., Annandale, Va.
Val, Sarah E., Washington, D.C.
VanAken, Francis, Rochester, N.Y.
VanBockern, Charlotte, Sioux Falls, S. Dak.
Van Cott, Daniel M., Pelham, N.Y.
Vandermast, Priscilla, Portland, Maine
Vandervander, Constance A., Charleston, W. Va.
Van Drimmelen, Jr., Thomas, Ogden, Utah
Van Houten, Bernadette M., San Francisco, Calif.
VanLuven, Elizabeth A., Washington, D.C.
Van Oss, Nina B., Talladega, Ala.
Van Tighem, Betty K., Great Falls, Mont.

Van Zant, Candice J., San Diego, Calif.
Varkauos, Despena, Vancouver, Wash.
Vasnick, Andrew J., White Plains, N.Y.
Vasys, Mary E., San Antonio, Tex.
Vaughan, Edna M., Houston, Tex.
Vaughan, Verdry D., Hyattsville, Md.
Vaughn, Sharla J., Little Rock, Ark.
Verner, Rochelle M., Atlanta, Ga.
Vernoski, Kathleen A., Rochester, N.Y.
Vezina, Isabelle, Portland, Maine
Vidrine, Jacqueline, New Orleans, La.
Vinci, Hazel M., W. Hartford, Conn.
Vinerola, Rosa, Rio Piedras, P.R.
Virkstis, Richard R., Brattleboro, Vt.
Virnig, JoAnn, Omaha, Nebr.
Vlug, Henry, Washington, D.C.
Voelkle, Terry A., Dallas, Tex.
Volpe, Marcia H., Seattle, Wash.
Von Tichner, Carmen R., Berkeley, Calif.
Vorek, Eileen E., Pittsburgh, Pa.
Vose, Mrs. B. A., Portland, Oreg.

W

Wagner, William H., Canton, Ohio
Wagoner, Debra J., Wilson, N.C.
Wahl, Allois W., Jacksonville, Il.
Wahl, Howard P., Jacksonville, Ill.
Wahl, Lewis B., St. Louis, Mo.
Wait, Jervin, Sioux Falls S. Dak.
Wakefield, Sally A., Medford, Oreg.
Walcott, Sherry, Portland, Maine
Waldron, Peggy L., Jacksonville, Ill.
Walence, Ann M., Columbus, Ohio
Walker, Arch W., Danville, Ky.
Walker, Elizabeth C., Tucson, Ariz.
Walker, Elizabeth S., Newark, Del.
Walker, Eugenia R., University, Ala.
Walker, Gerard, Raleigh, N.C.
Walker, Newton F., Spartanburg, S.C.
Walker, W. Garrett, Morganton, N.C.
Wall, Kathy L., Philadelphia, Pa.
Wall, Pauline W., Danville, Ky.
Walmsley, Constance M., Los Angeles, Calif.
Walrath, Margaret S., Sacramento, Calif.
Walter, Ann E., Oberlin, Ohio
Walter, Gerard, Rochester, N.Y.
Walters, D. Wayne, Indianapolis, Ind.
Walters, Glenn C., Riverside Calif.
Walters, Holly M., Riverside, Calif.
Walters, Kay M., Great Falls, Mont.
Walthall, Doris L., San Antonio, Tex.
Waltrip, Betty, Fulton, Mo.
Wampler, Dennis W., Santa Rosa, Calif.
Wanat, Mary V., Williamsville, N.Y.
Warchol, Barbara A., Rochester, N.Y.
Ward, Ellin B., York, Pa.
Ward, Gillis B., Houston, Tex.
Ward, Sr. Marie Michael, Randolph, Mass.
Ward, Rosie G., Jackson, Miss.
Ward, Virginia M., Danville, Ky.
Warden, Sheridan E., Ann Arbor, Mich.
Wareham, Betty A., Rochester, N.Y.
Warren, Carrie, Omaha, Nebr.
Warren, Judith G., Plattsburgh, N.Y.
Warren, Katherine N., Rochester, N.Y.
Warshaw, Carol E., Olathe, Kans.
Warshawsky, Celia, River Forest, Ill.
Washburn, Arthur, Tecumseh, Mich.
Waterman, Joan B., St. Augustine, Fla.
Waters, Lee L., Richmond, Ky.
Waters, Sharon J., Santa Ana, Calif.
Watkins, Carla, Little Rock, Ark.
Watkins, Dorothy H., Pittsburgh, Pa.
Watkins, Jr., Earl C., Delavan, Wis.
Watson, Anita H., Hickory, N.C.
Watson, Evelyn W., Morganton, N.C.
Watson, Inez L., St. Augustine, Fla.
Watson, Jean, Wilson, N.C.
Watson, Paul, Washington, D.C.
Watson, Robert C., Wilson, N.C.
Watters, Robin S., Pittsburgh, Pa.
Watts, Ed J., Colorado Springs, Colo.
Watterson, Elma L., St. Charles, Ill.
Waugh, Michael Z., Olathe, Kans.
Weadick, Bernice F., Denver, Colo.
Weakley, Thomas J., Indianapolis, Ind.
Wean, Dennis F., Morganton, N.C.
Wean, Dianne, Hickory, N.C.
Weatherly, Eugene, Cave Spring, Ga.
Weber, Jimmie D., Pittsburgh, Pa.
Weber, Terril D., Columbus, Ohio
Webster, Gaye, Greensboro, N.C.
Wecht, Susan B., Berkeley, Calif.
Weed, Margaret E., St. Augustine, Fla.
Wehrli, Robert, Washington, D.C.
Weidner, Eunice P., Mill Neck, N.Y.
Weingold, Harold S., Romney, W. Va.
Weisbart, Debra E., Santa Ana, Calif.
Weiss, Don, Fulton, Mo.
Welch, Charles W., Fairfax County, Va.
Welch, Jake, Sulphur, Okla.
Weller, Rosemary D., Washington, D.C.
Wells, Catherine P., Flint, Mich.
Wells, Charles A., Flint, Mich.
Welsh, Verna T., Hialeah, Fla.
Wendehl, Steve, Des Moines, Iowa
Wendorff, Phyllis R., Beverly, Mass.
Wesley, Martha T., Rochester, N.Y.
Wesley, Zelma L., Washington, D.C.
Wesner, Katheryn J., Virginia Beach, Va.
Wesnofske, Matthias, Lake Ronkonkoma, N.Y.
West, Barbara, Wilson, N.C.
West, David C., Santa Fe, N. Mex.
West, Elizabeth M., Jacksonville, Ill.
West, Eve L., Elwyn, Pa.
West, Helen J., Anchorage, Alaska
Westbrook, John D., Austin, Tex.
Westby, Vicki, Sioux Falls, S. Dak.
Weston, Fred S., Phoenix., Ariz.
Westwell, George, Belleville, Ontario, Canada
Wheeler, Elizabeth R., Frederick, Md.
Wheeler, Leslie, Baton Rouge, La.
Whisman, Charley E., Indianapolis, Ind.

Whitaker, Frances D., Raleigh, N.C.
White, Alfred H., Frederick, Md.
White, Agnes B., Danville, Ky.
White, Frances M., Austin, Tex.
White, Gail J., Lawndale, Calif.
White, Gloria W., Norwich, Conn.
White, Henry L., St. Augustine, Fla.
White, Jane, Chapel Hill, N.C.
White, Janice I., Flint, Mich.
White, Jr., John, Jackson, Miss.
White, Linda K., Wheat Ridge, Colo.
White, Maurice M., Vancouver, B.C., Canada
Whitehouse, Karia P., Danville, Ky.
Whitehouse, Mary S., Danville, Ky.
Whitesell, Kathleen M., Morganton, N.C.
Whiteside, Sharon L., Colorado Springs Colo.
Whitfield, Patricia, Wilson, N.C.
Whitley, Sarah W., Jackson, Tenn.
Whitney, Kenneth J., Vancouver, Wash.
Whitson, Judith C., Little Rock, Ark.
Whittom, Merle M., Berkeley, Calif.
Whitworth, Jim, Cave Spring, Ga.
Widdicombe, Charles R., Faribault, Minn.
Widmer, Henry N., Jacksonville, Ill.
Wiedey, Linda B., Morganton, N.C.
Wiens, Carlton T., Tucson, Ariz.
Wilbur, Elizabeth J., Framingham, Mass.
Wilcox, Maudine C., Talladega, Ala.
Wilcox, Nancy L., Lawndale, Calif.
Wilding, David G., Gooding, Idaho
Wilkes, Penny T., Tucson, Ariz.
Wilkinson, Donald F., Santa Fe, N. Mex.
Wilkinson, Edna G., Rochester, N.Y.
Wilkinson, Mattie, Jackson, Miss.
Wilkinson, Myrlene E., Vancouver, Wash.
Will, Gary L., St. Augustine, Fla.
Willard, Wennonah S., Dallas, Tex.
Williams, Carolyn M., Knoxville, Tenn.
Williams, Carolyn S., Indianapolis, Ind.
Williams, Clarence M., Washington, D.C.
Williams, Diane R., Solano Beach, Calif.
Williams, Donna M., Danville, Ky.
Williams, Elizabeth D., Romney, W. Va.
Williams, Helen, Fulton, Mo.
Williams, Helen, Kenosha, Wis.
Williams, Jacqueline, Rochester, N.Y.
Williams, Jane C., Hickory, N.C.
Williams, Katharine A., Talladega, Ala.
Williams, Kathryn J., Santa Ana, Calif.
Williams, Lenora V., Jackson, Miss.
Williams, Linda M., Clarkston, Ga.
Williams, Marilyn M., Morganton, N.C.
Williams, Martha G., Talladega, Ala.
Williams, Peggy, Sulphur, Okla.
Williams, Penney L., Seattle, Wash.
Williams, Phoebe G., Millburn, N.J.
Williams, Sharon A., Little Rock, Ark.
Williams, Sondra S., Pittsburgh, Pa.
Williams, Wayne B., Knoxville, Tenn.
Williamson, Elaine W., Knoxville, Tenn.
Williamson, Kathryn W., Berkeley, Calif.
Williamson, Mary S., Wilson, N.C.
Willie, L. K., Gooding, Idaho
Willis, Arthur, Berkeley, Calif.
Willis, Patty A., St. Augustine, Fla.
Wills, Robert C., Olathe, Kans.
Wilma, Paula D., Seattle, Wash.
Wilson, Anne M., Greeley, Colo.
Wilson, Charline, Knoxville, Tenn.
Wilson, Frances S., Staunton, Va.
Wilson, G. I., Salem, Oreg.
Wilson, Grace E., Rome, N.Y.
Wilson, Helena, Dallas, Tex.
Wilson, Jimmie J., Rochester, N.Y.
Wilson, Laverne, San Antonio, Tex.
Wilson, Louise, Chicago, Ill.
Wilson, Lynn, Spartanburg, S.C.
Wilson, Margaret O., Los Angeles, Calif.
Wilson, Ronald F., Morganton, N.C.
Wilson, Sandra R., Columbus, Ga.
Wilson, Sylvia E., Pittsburgh, Pa.
Wiltse, Frances T., Devils Lake, N. Dak.
Wiltse, Lyle A., Devils Lake, N. Dak.
Winalski, Gerard R., Columbus, Ohio
Winchester, Kent, Rochester, N.Y.
Winckler, Barbara L., Batavia, Ill.
Winsett, Ann, Covina, Calif.
Winship, Kristin M., Riverside, Calif.
Winter, Phyllis C., Chicago, Ill.
Winters, Ellen, Berkeley, Calif.
Wiseman, Jille, Marietta, Ohio
Wish, Glenda R., Ft. Lauderdale, Fla.
Wisner, Jane C., Jackson, Miss.
Witczak, Betty N., Riverside, Calif.
Withrow, Margaret S., Washington, D.C.
Witruk, Carolyn, Urbana-Champaign, Ill.
Witte, Diane K., Jacksonville, Ill.
Wohlner, Lynne A., Mountain Lakes, N.J.
Wold, Rosemary T., Edmonds, Wash.
Wolf, Elsie, Portland, Maine
Wolfe, Mary F., St. Augustine, Fla.
Wolff, Louise, Gooding, Idaho
Wolff, Natalie D., W. Hartford, Conn.
Wolff, Sydney, Geneseo, N.Y.
Wolk, Julia M., White Plains, N.Y.
Womeldorf, Anne, Washington, D.C.
Wood, Barbara A., Knoxville, Tenn.
Wood, Betty L., Portland, Maine
Wood, David, Portland, Maine
Wood, Edward P., Talladega, Ala.
Wood, Hazel P., Talladega, Ala.
Wood, Janice M., Council Bluffs, Iowa
Wood, Mrs. R. Fred, Dallas, Tex.
Wood, Sally A., San Diego, Calif.
Woodcock, Kathy D., Wilson, N.C.

Woodruff, Irvan L., Berkeley, Calif.
Woodrum, Dorothy P., Staunton, Va.
Woods, Brenda J., St. Augustine, Fla.
Woods, Lucie S., Romney, W. Va.
Woods, Mary L., Washington, D.C.
Word, Muriel, Houston, Tex.
Worden, Virginia E., Gainesville, Fla.
Worthington, Margaret A., Washington, D.C.
Wright, Avis L., Staunton, Va.
Wright, Evelyn S., Jacksonville, Ill.
Wright, Hal W., Wilson, N.C.
Wright, Martha, Las Vegas, Nev.
Wright, Ruth A., Fulton, Mo.
Wright, Virginia, Olathe, Kans.
Wukadinovich, Elodie, Riverside, Calif.
Wyks, Hollis W., Trenton, N.J.
Wyks, Margaret L., Newark, Del.
Wylie, Joan C., Pittsburgh, Pa.

Y

Yakimoff, Rosemary T., Philadelphia, Pa.
Yarbro, Fay, San Antonio, Tex.
Yates, Annabel M., Staunton, Va.
Yates, Fred P., Richmond, Va.
Yeager, Charles H., Washington, D.C.
Yedlicka, Linda B., Pittsburgh, Pa.
Yelverton, Norma T., Wilson, N.C.
Yingling, Phyllis S., Baltimore, Md.
York, Janet A., Hamden, Conn.
York, Judy M., Rochester, N.Y.
Yoshiba, Christine M., Kansas City, Kans.
Yoshitatsu, Nakano, Hiroshima, Japan
Yost, J. Kelley, Colorado Springs, Colo.
Young, Annette S., Saugus, Calif.
Young, Elizabeth C., Pittsburgh, Pa.
Young, Ellen B., Pittsburgh, Pa.
Young, Jane, Danville, Ky.
Young, Sr. Loretta, Buffalo, N.Y.
Young, Marsha A., Rochester, N.Y.
Young, Pamela M., Morganton, N.C.
Young, Sr. Virginia, Buffalo, N.Y.
Youngelson, Ellen, New York, N.Y.
Youngers, Richard, Sulphur, Okla.
Younggren, Darwin C., Great Falls, Mont.
Youngs, Jr., Joseph P., Portland, Maine
Youngs, Mary S., Portland, Maine

Z

Zagata, Robert E., Fairfield, Calif.
Zalowski, Jean A., Longmeadow, Mass.
Zechman, Joan M., Rochester, N.Y.
Zehr, Rachel, Normal, Ill.
Zehrfeld, Vicky A., Salem, Oreg.
Zemaitis, Regina A., W. Hartford, Conn.
Zerbe, Judith K., Rochester, N.Y.
Ziegler, Mary L., Jacksonville, Fla.
Zier, Cathy D., Knoxville, Tenn.
Zieziula, Frank R., New York, N.Y.
Zimmerman, Carla, New York, N.Y.
Zimmerman, Maria E., Lake Ronkonkoma, N.Y.
Zimmerman, Mildred S., Frederick, Md.
Zoll, James G., Rochester, N.Y.
Zook, George A., Jacksonville, Ill.
Zugner, Penny, Rome, N.Y.
Zurek, Nancy M., W. Hartford, Conn.
Zurline, Beverly, Chickasha, Okla.
Zwick, Leonard G., Rochester, N.Y.
Zylstra, Susan E., Seattle, Wash.

FORTY-SEVENTH BIENNIAL MEETING CONVENTION OF AMERICAN INSTRUCTORS OF THE DEAF

"Our Learning Society—Issues and Trends in Education of the Deaf"

PROGRAM COMMITTEE

CHAIRMAN

Robert R. Davila, Ph. D.
Director
Kendall Demonstration Elementary School
Washington, D.C.

COORDINATORS OF CONCURRENT SESSIONS

Sr. Frances Solano, Ph. D.
Coordinator of Curriculum Development and Evaluation
St. Francis de Sales School for the Deaf
Brooklyn, New York

Edgar L. Lowell, Ph. D.
Director
John Tracy Clinic
Los Angeles, California

Barbara Beggs, Ed. D.
Chairman, Division of Communication Disorders
Southern Methodist University
Dallas, Texas

Larry G. Stewart, Ed. D.
Associate Professor
Rehabilitation Center
University of Arizona
Tucson, Arizona

COORDINATOR OF SHORT COURSES

Carl J. Kirchner, M.A.
Assistant Director
Kendall Demonstration Elementary School
Washington, D.C.

EDITORS' NOTE

The following represents as complete a record as possible of the proceedings of the 47th biennial meeting of the Convention of American Instructors of the Deaf. Included here are all papers that were submitted to the editors for publication.

R. DAVILA
D. TWEEDIE

SHORT COURSES

Carl J. Kirchner, Assistant Director,
Kendall Demonstration Elementary School, Coordinator of
Short Courses

SHORT COURSE DETAILS AND DESCRIPTIONS:

MONDAY, JUNE 23

Title of short course: "Language Development."

Instructor of short course: Virginia Heidinger, Ed. D., Associate Professor of Education, Gallaudet College, Washington, D.C.

Brief description of short course

Concepts from modern (transformational) grammar needed by teachers of the hearing impaired including information on basic sentence patterns.

Applying knowledge from psycho-linguistics and modern grammar: (a) in the development and evaluation of language in the hearing impaired; (b) in developing teacher-made materials in language and academic areas; (c) in assessing the difficulty of commercially available materials.

Using unit planning and pattern approach in a curriculum development.

TUESDAY, JUNE 24

Title of short course: "Total Communication in the Classroom."

Instructor of short course: Carl J. Kirchner M.A., Assistant Director, Kendall Demonstration Elementary School, Washington, D.C.

Brief description of short course

This short course deals with the "HOW" to pull together speech, auditory training, speechreading, fingerspelling and the language of signs in effecting a total communication environment within the classroom. Discussion of the real "WHAT" of total communication is a sequel to the many "WHY" workshops held over the past few years.

Presentation of techniques showing how a lesson can be used to reinforce the specific components of total communication. In addition, how to go about organizing a total communication classroom day will be presented. Video-tapes will be used for analysis.

WEDNESDAY, JUNE 25

Title of short course: "Professional Relationship."

Instructor of short course: Larry Porter, Ed. D., Organizational Consultant in Private Practice, Washington, D.C.

Brief description of short course

A "how-to-do-it" human dynamics presentation for professional teachers to assist them in interpersonal relationships. The presentation will focus on increasing the potential of teachers in day-to-day dealings with students, para-professionals, parents, and administrators.

This will be an experience-based workshop in which participants will act as resources to each other for purposes of increasing self-awareness relating to interpersonal styles.

THURSDAY, JUNE 26

Title of short course: "Behavior Modification."

Instructor of short courses: Robert Lennan, Ed. D., Assistant Superintendent, Deaf—Multi-Handicap Unit, California School for the Deaf, Riverside, Calif.

Brief description of short course

The basic premise of this short course is that since behaviors are learned, reshaping behaviors will often lead to better functioning with the classroom.

Principles of behavior modification and their application in the classroom will be discussed and demonstrated. Video-tape presentation by teachers using specific classroom techniques will serve as learning reinforcers. Strategies for teaching adaptive behaviors will be presented along with additional handout materials.

KEYNOTE ADDRESS

Donald P. Ely, Ph. D., Professor of Education, Area of Instructional Technology, Director, Center for the Study of Information and Education, Syracuse University, Syracuse, N.Y.

EDUCATION BEGINS WHERE TRAINING ENDS

The Deaf Learner in a Learning Society[1]

One of my heroes is John Gardner, former Secretary of Health, Education, and Welfare and currently President of Common Cause. In his book, Self-Renewal (Slide #1), he states the major goal of education—to help each person become responsible for his own learning. I'd like to suggest that this goal become our goal as we seek to educate the learners who come to us.

We often neglect the longer range goals in teaching in order to concentrate our efforts on the day-to-day objectives (Slide #2) which seem difficult enough to attain. After all, we have been admonished to state our behavioral objectives so that our teaching efforts will be focussed. Our diligence in objective-stating often clouds the importance of goals and we miss the proverbial forest (Slide #3) because we are so busy looking at the trees. Would you accept, with me, the goal of helping each learner to become increasingly responsible for his/her own learning?

You might say, "That is what I am doing now." And perhaps you are. But I would raise yet another question, "Are we training students or educating them?" Gardner says, in the same book (Slide #4) "We are giving our young people cut flowers when we should be teaching them to grow their own plants." In this statement is the essence of the difference between training and education.

Training (Slide #5) emphasizes imitation of a model. It values memorization of what the book or the teacher says. It considers things as they are. The symbols of training are the textbook, the lecture and the expository film. Education (Slide #6), on the other hand, emphasizes creative interaction between the learner and resources. It values judgment and critical thinking. It considers things as they might be. The symbols of education are problem-solving, discovery and inductive thinking. Training asks, "how?" Education asks "how" and "why."

---

[1] A paper presented at the 47th Biennial Meeting of the Convention of American Instructors of the Deaf, Greensboro, N.C., June 23, 1975.

Another of my heroes is Edgar Dale, Professor Emeritus of Education, Ohio State University. In his brilliant essay, "Education or Training?" (Slide #7) he lucidly describes the distinction.

Training (Slide #8) emphasizes short range, limited, inflexible goals with fixed ceilings. The learning task is predictable; the route to be traveled is clearly and neatly mapped. . . . Training favors one-way communication—from teacher to student. The textbook and the lecture are usually memorized, rarely criticized. There is limited sharing of ideas and feelings in a mood of mutuality. . . . The trained person . . . is at home with the familiar situation but ill-at-ease and disorganized when the fixed habit does not work.

Education (Slide #9), however, emphasizes long-range, broad goals with flexible ceilings unlimited horizons.

The compass becomes more important than the foot rule. . . . Education emphasizes changing ends and changing means. Education has bifocal vision and links the present to the future. . . . (It) thrives on criticism, judgment, evaluation. It favors and requires feedback, the unlimited sharing of ideas and feelings. . . . The educated person . . . is at home in the atmosphere of uncertainty.

It is my contention that many teachers, including teachers of the deaf, are more concerned with training than with education. (Slide #10) In our compassion for the student we feel that we must provide the tools for an individual to cope with his/her world. We often become so concerned that our students leave with useful skills, that we forget the need to provide more than skills—critical reading, viewing and observing. We may be successful in teaching reading but we do not help learners to develop the ability to be critical, analytical an[illegible] judgmental of what they read. In an ever changing society (Slic[illegible] #11) which is increasingly dependent upon individuals to cope with newness we need to provide these added dimensions which go beyond basic skills. There is a place for training (Slide #12) within the context of education. We need the basic skills to read, to write and to perform motor tasks but we cannot end there. If training can go on within an environment of education it will help to associate means with ends.

The trained persons depend upon others for instruction. The mature, independent learner (Slide #13) is on the road to becoming responsible for his/her own learning. Education permits independence in learning; training calls for continuing dependence. The trainer usually does all the talking; the educator leaves part of the discovery for the learner. Few people shout "Eureka" during a training session. (Slide #14)

The distinction between training and education is essential in understanding the theme of this conference—"Our Learning Society." One of the current "in" words is (Slide #15) life-long education (or continuing education). The premise behind the revival of this movement, which has always been with us, is that everyone must be prepared for a world of rapid changes. Current predictions are that individuals will change careers three or four times during their working life. Each new career will require training. The educated individual will be able to handle each new training experience with relative ease and independence. The individual who is merely trained (Slide

#16), will have to return to "Go." Training in some fields has limited usefulness. Some say that the basic "how to" skills of engineers is good for only five years. At that time the engineer has to go back to school.

Going back to school does not necessarily mean sitting in a classroom in an educational institution. (Slide #17.) The new approaches to non-traditional study call for learning in many settings—the home, the office, the factory, the automobile and under a tree in the park. With the development of small, inexpensive equipment and media (Slide #18) (including printed materials) it is now possible to provide more options in more settings for more individuals. The ideal of accommodating for individual differences is now more possible than it has ever been before. (Slide #19.)

		OBJECTIVES	
		Instructor	Learner
MEANS	Instructor	A	C
	Learner	B	D

Individualizing instruction is not new to educators of the deaf. A deep concern for the individual learner has always been evident. Instruction has been designed for individuals whenever possible. But the one term "individualizing instruction" is not sufficient to describe the range of possibilities for dealing with the individual learner. (Slide #20) (The form of individualization must change depending upon the objectives and the long range goal of helping individuals to become increasingly responsible for their own learning. I would like to posit four different types of individualization for the purpose of learning. If we look at two simple but significant dimensions to instructional design—objectives and means—(Slide #21) and then decide who initiates each, we can establish a matrix which describes four types of individualization. Type A (Slide #22) occurs when the instructor determines both the objectives and the means. For example, in early stages of teaching reading the teacher will determine the objective to be reached and decide upon the resources that will be used. This is often the approach used in training. Type B (Slide #23) indicates that the instructor states the objectives, but the student is given the choice of selecting the means (resources) to accomplish the objective. For example, the teacher might want each student to name a color as a stimulus is presented within 10 seconds. The media center provides a filmstrip, a booklet, or a self-instructional device. The student has the option to select any one (or more) of the materials to reach the objective. This could be considered a blend of training and education as we are using the terms in this presentation. Type C (Slide #24) shows the student selecting the objective and seeking assistance from the instructor to help identify the means. In this type of individualization, the student may say, "I want to learn to print with mechanical devices." The teacher might point out a lettering guide, a rubber stamp set and paste on letters. The student could try any one (or all) methods and determine which one best helps to fill the need. When we get students to raise their own questions and to state their own objectives we are in the education area even though a training approach may be required to reach the objective. Type D (Slide #25) where the student determines both the objectives and the means is what independent study is all about. When we reach this point we know that we are in the realm of education, not training. This is what we should be aiming for. An example would be for an individual to want to paint a picture. (Slide #26) This would require a decision not only of what to paint and in which style, but also requires selection of the painting surface (type of material, size, etc.) and type of colors to use (oils, water color, pastels, chalk, etc.).

More and more of our students will have to become Type D learners who are able to identify their learning needs and then to go out and find the resources to accomplish them. These individuals will have to be part of an educational system which includes training but goes beyond it. They will be on the road to becoming life long learners.

Several years ago there was a study done at my University entitled The Learning Force. (Slide #27) The author determined that there are now more adults in education and training situations outside the formal school setting than in it. (Slide #28) If we consider business, industry, the military, TV courses, correspondence courses, and certain other adult education endeavors, more adults are participating in those activities than in formal schools, colleges and universities. The number is likely to increase.

The question we must ask ourselves is, (Slide #29) "Are our students ready to assume the role of self-starting, independent learners when they leave our schools?" What experiences and opportunities are we offering to help them achieve the state of creative interaction (Slide #30) rather than passive acceptance?" Now we tend to hover over our students and do their work for them. If we value cooperation, (Slide #31) helping each other, why not let students teach each other? They already do this when they get together to cram for an examination. The examination, unfortunately, is a test of the ability to remember disconnected, disorganized, piecemeal information until examination time. We should capitalize on the student's interest by permitting him to tell others about things in which both he and his fellow students have some interest. A group of teachers once took a one week workshop on programming a computer for instructional purposes. They returned to their school and taught their colleagues

(Slide #32) how to do it in three afternoons at the end of the school day. The teachers then taught a few students how to do it in two or three hours. These students, in turn, taught other students the basic principles in about one half hour. We don't know what was lost in the process, but it certainly became efficient!

One reason we don't permit students to have more responsibility is that we don't know how to do it. Furthermore, we may discover the devastating fact that a student can learn well by other methods than those we traditionally use. (Slide #33) The host of resources which now are available offer options that were never available before. We all know about slides, (Slide #34) films, computer assisted instruction, filmstrips, programmed instruction, TV and other media but we have not embraced them fully so that maximum benefit can be attained by their use.

Would you dream with me for a minute? (Slide #35) Suppose you were redesigning your entire curriculum (the total spectrum of experiences you feel your students should acquire)—and you had a year to do it at full-salary; any media resources you felt were necessary and personnel to assist you in the planning, production and testing of your curriculum units, where would you begin? What would you do? What would you request? What would you need to know that you don't know now? Perhaps we could start where we are with what we have and begin to achieve dramatic results.

It is easy for me to pose the problems and present the challenges. It is much more difficult to do something about them. I am not completely isolated from the problems and the challenges I have outlined. For the past five years at Syracuse University we have had a doctoral program (Slide #36) in educational technology for educators of the deaf supported by the Training Division of the Bureau for Education of the Handicapped. We have attempted to bring in experienced educators of the deaf from two–three years and provide the kind of program for each which prepares educated persons to design instruction for deaf learners. (Slide #37) Six people (including two deaf individuals) have completed the Ph. D.; nine others are in process. We try to help these persons to view the larger goal of education for themselves and for the students for whom they will eventually be responsible. This program is a form of continuing education for each person involved. We try to practice what I am preaching about today. Some doctoral programs train their candidates; we try to educate them. I believe the same principles can apply across the board from the preschool to adult and continuing education.

Some people unfortunately are neither trained or educated. Their life is a jumble of disconnected events (Slide #38) with problems they cannot analyze and correct. An educated person tries to connect his life experiences; (Slide #39) to relate them to each other. He is working to find out where he has been, where he is now and where he is going. He knows that in order to be educated he must tie together what happened yesterday with what is happening today and what might happen tomorrow. A person on the road to education is searching for relationships among experiences. (Slide #40) Schools and colleges have the obligation to help students structure their lives by developing a web of relationships which is strengthened day-to-day, month-by-month and year-by-year. The process of connecting things up, of structuring our experiences into concepts, has a simple name—the process of thinking and valuing. Thinking and valuing have much in common. Both are concerned with asking why. Both are concerned with evaluating our experiences—separating the important from the unimportant, the relevant from the irrelevant, the stupid from the wise. Thinking and valuing forces us to ask tough questions about the way we invest our time, our energy, our money, our affections. To think is to connect things up, to search and discover hidden relationships, to judge, to evaluate; in short, to become responsible for our own learning. I wish you well on your journey.

Monday, June 23, 1975

TOPIC: The Learners: Where They Are And How They Got There

THE ROLE OF INSTRUMENTAL SPEECH PROCESSING AIDS IN A SPEECH TRAINING PROGRAM

Arthur Boothroyd, Ph. D., Clarke School for the Deaf,
Northhampton, Mass.

A. INTRODUCTION—DEVELOPMENT OF THE MOTOR SKILLS OF SPEECH

Intelligible speech requires, among other things, the control and coordination of the muscles of breathing, phonation and articulation. Denied the sense through which the normally hearing child acquires this control, the hearing impaired child must use other means to perceive speech models and to monitor his attempts at imitation. These can be grouped conveniently under three headings: (i) Descriptive; (ii) Natural; and (iii) Instrumental.

One way to provide descriptive input is to tell a student what to do with his articulators. Another is to point to phonetic symbols. Similar techniques may be used to provide descriptive feedback.

Natural methods require that the student use his eyes, his hands or his defective ears to perceive real speech movements. The most natural method obviously involves the use of residual hearing. It might be argued that this is an instrumental approach because it generally requires amplification. However, the change introduced in the speech signal is only one of magnitude, rather than of form.

Instrumental approaches to speech training involve the use of devices which analyze and transform the acoustic speech signal. As with natural approaches, the eyes, the hands and, in some cases, the ears of the deaf student may be used for perception of these transformed signals. Figure 1 is intended to illustrate these various alternatives.

A case can be made for the need to supplement traditional techniques which rely on descriptive and natural procedures. Descriptive feedback suffers from the inherently low reliability of the human observer whose very nature is to seek meaning in a speech utterance and to overlook defects of production. The natural visual channel is limited by the invisibility of the larynx, the velum and the breath stream, and the undue emphasis given to lip movements at the expense of the more important tongue movements. Pitch, voice quality and place of articulation cannot be felt by the hands, and many deaf children have insufficient residual hearing to benefit from an exclusively auditory approach.

The purpose of this paper is to review briefly the use of instrumental speech training aids at the Clarke School for the Deaf and to discuss the factors which may have limited their widespread application.

B. THE USE OF INSTRUMENTAL SPEECH TRAINING AIDS AT THE CLARKE SCHOOL

Under the direction of Dr. Clarence V. Hudgins, the Research Department carried out numerous studies on the development, production and perception of speech by deaf children. As part of this work Dr. Hudgins applied a variety of instrumental techniques. In the 1930's, the school purchased a Coyne pitch indicator which displayed fundamental frequency on a vertical column of lights (Coyne 1938). Dr. Hudgins himself developed a pneumodeik, which measured intra-oral pressure and could be used for improving velar function and the contrast between voiced and voiceless plosives (Hudgins 1935). He also made extensive use of the kymograph, and later the sound spectrograph, for diagnostic measurements of deaf children's speech (Hudgins 1952). One of his major contributions was his demonstration of the effectiveness of the natural auditory channel in students who might previously have been considered totally deaf (Hudgins 1953).

Following Dr. Hudgins' death, little use was made of instrumental aids until the late 1960's. At the present time, two pitch indicators are in use in the school. One is the FLORIDA I device, developed by Holbrook and containing some intriguing facilities for behavior-shaping (Holbrook and Crawford 1970). The second was developed at the school and displays fundamental frequency as a function of time on an oscilloscope screen (Boothroyd 1973).

In 1971, the school became involved in the development and formative evaluation of a general-purpose system of speech training aids. This was designed and built by Bolt, Beranek and Newman, Inc. under an Office of Education contract. It employs a filter bank and a Digital Equipment PDP8e computer to analyze the speech signals and to generate displays on the screen of a cathode ray tube (Nickerson and Stevens 1973) (see Fig. 2).

This system has been used at the school for speech analysis, remedial tutoring and independent practice since September 1972. Four programs are currently in use, each representing a different type of display. One shows selected speech parameters (loudness, pitch, nasality, etc.) as functions of time; a second displays an instantaneous speech spectrum; a third shows a cartoon face whose features can be controlled by certain speech parameters; and the fourth is a game in which the child can use the pitch of his voice to control the trajectory of a ball. A fifth program is also available for speech analysis. This provides a computer print-out of selected parameters from a two-second speech sample. (For further information on this system see Nickerson and Stevens 1973, Boothroyd, et al. 1975.)

One-to-one remedial tutoring has been undertaken with approximately 50 students. Each has followed a similar program consisting of four phases: i) development of basic motor skills, ii) incorporation of these into rehearsed speech, iii) internalization of the new skills to remove the need for continuous visual feedback and iv) activities designed to facilitate carry-over to spontaneous communicative speech. The typical student received a total of ten hours' tutoring in daily sessions of twenty minutes each. Most of the work dealt with suprasegmental features though some articulatory training was also undertaken.

The results of this and other studies have indicated that the development of motor skills and their incorporation into rehearsed speech is relatively easy. Considerably more difficult is the generalization of new skills to communicative speech outside the tutoring room. This is hardly surprising when one considers the relatively short periods of time available for supervised production of correct behaviors.

Students have been assigned time, outside the normal school day, when they could use the system for independent practice of materials assigned by their tutors, It quickly became apparent that a single, large, general-purpose system cannot begin to meet the needs of a large student body. A clear need was seen for small, limited-purpose speech training aids which could be used by students at home, or in the dormitory, for unsupervised practice of assigned material, much as a student of the piano rehearses without constant teacher supervision. Such aids are currently being developed at the Clarke School and some are in experimental use in the speech program (Boothroyd and Damashek 1975, Boothroyd 1975).

C. OBSERVATIONS

Several years of study in this field have led the writer to the following conclusions:

1. The effectiveness of speech training aids for the deaf in developing basic speech motor skills has been amply demonstrated on innumerable occasions. This is their function—to provide temporary feedback during the acquisition of skills whose moment-to-moment control must be taken over by other channels. Speech training aids have not generally been found to improve the intelligibility of communicative speech. This is not their function. Speech is much more than a series of motor skills. It is an acoustic/motor code used for the

transmission of linguistic symbols which themselves represent an encoding of organized thought. The instrumental aid can assist in developing basic skills, but capitalization on those skills and their incorporation into the process of verbal communication is a complex task in which the speech processing aid has little or no part to play.

One factor is very relevant to the role of speech training aids—that of wearability. With few exceptions, the speech training aids so far evaluated have been not-wearable. They are large instruments which temporarily monopolize the activities and sensory inputs of the child. It may be that wearable speech training aids (which will also function as speech perception aids) will indeed play an important role in the day-to-day development of verbal communication skills. This is certainly the case with the hearing aid. It is quite reasonable to anticipate wearable speech processing aids in the not-too-distant future.

2. Instrumental speech training aids are often thought of as potential substitutes for teachers. This is a mistaken approach. These devices are tools for teachers. The effectiveness of their application cannot exceed that of the teacher who uses them or of the program in which they are used. In fact, just as a poor photographer may take worse pictures with a sophisticated camera than with a simple box camera, so a poor teacher may obtain worse results with speech training aids than with natural and descriptive techniques. Not only is the expertise of the teacher important, but also her knowledge. Even the simplest speech training aid requires, for its effective use, a knowledge of acoustic and physiological phonetics beyond that typically acquired in a teacher training program. One of the greatest needs in this area is for the in-service training of teachers after they have had classroom experience.

3. The design of speech training aids should be directed by the needs of educational programs and also by analysis of the specific roles they are expected to fill. Concurrently with the development of the devices themselves, there need to be developed instructional materials, procedures and organizational frameworks within which they can be used effectively.

4. An important question in relation to the development and utilization of speech skills is that of answerability. Which one person, in an educational program, should be responsible for knowing an individual child's speech status, assessing his needs, establishing developmental and remedial objectives and monitoring the results of training? Many programs employ one or more specialist teachers in the area of speech. But the ratio of students to specialist teachers is typically too great for the establishment of the necessary depth of contact with each child. It is the opinion of this writer that an individual student's speech program should be the responsibility of a classroom teacher—or, at least, someone who need divide her attention between no more than eight or nine hearing impaired children. This again points to the need for adequate in-service training and the development of organizational models which will permit the teacher to manage the speech programs for her students. It may also be that instrumental aids can play a significant role in facilitating organization through independent practice, effective use of paraprofessionals, and the provision of objective diagnostic information.

5. There is a danger of overusing instrumental speech training aids, even when their limited role is understood. The need for these aids was justified on the basis of the shortcomings of descriptive and natural approaches. But a careful scrutiny of these shortcomings will reveal that they are to a considerable extent complementary. The manner-of-articulation information which cannot be seen by the eyes may be felt by the hands. The prosodic information which is missed by the eyes and the hands may be perceived with minimal residual hearing. Moreover, the number of hearing impaired children who can perceive prosodic and manner-of-articulation information with their ears, and integrate this effectively with place-of-articulation information obtained with their eyes, represents a considerable proportion of the total. Not only do instrumental aids have a limited role, but their use with the wrong children may result in the failure to employ more effective channels.

D. IN CONCLUSION

At the present time there is much that can be done with a flexible, general purpose system of speech training aids in the areas of: (i) Diagnostic evaluation; (ii) Diagnostic tutoring; (iii) Remedial therapy; and (iv) Development of new procedures for speech analysis and speech training.

In addition, there is considerable potential for the use of small, inexpensive, limited-purpose aids which can be used for independent practice of partially learned skills within an effective speech management program.

There are no simple answers to education of the deaf, no short cuts, and no substitutes for excellence of teaching. Instrumental speech training aids may, however, provide tools which can be used to effect by well trained teachers working within well organized programs.

Acknowledgements

The construction and evaluation of the computer-based system of speech training aids was funded by the Office of Education (Contract # 0-71-4670). Principal investigators for this project were Drs. Raymond Nickerson and Kenneth N. Stevens of Bolt, Beranek and Newman, Inc. Their interest in, and contribution to, the Clarke School program are gratefully acknowledged.

REFERENCES

Boothroyd, A., Some Experiments on the Control of Voice in the Profoundly Deaf using a Pitch Extractor and Storage Oscilloscope Display. I.E.E.E. Trans. on Audio, and Electroacoustics 21 (3), 274–278, 1973.

———. Use of the "S" Indicator for Unsupervised Drill—a Pilot Study. Clarke School report, S.A.R.P. # 19, 1975.

Boothroyd, A., Archambault, P., Adams, R. E., Storm, R. D., Use of a Computer-based System of Speech Training Aids for Deaf Persons. Volta Review 77 (3), 178–193, 1975.

Boothroyd, A., Damashek, M., Development of Small Speech Training Aids for the Deaf—a Progress Report. Clarke School report S.A.R.P. # 18, 1975.

Coyne, A. E., The Coyne Pitch Indicator, Volta Review 40, 437–439, 468–469, 549–552, 598–599, 1938.

Holbrook, A. and Crawford, G. H., Modification of Vocal Frequency and Intensity, in the Speech of the Deaf. Volta Review 72 (8), 492–497, 1970.

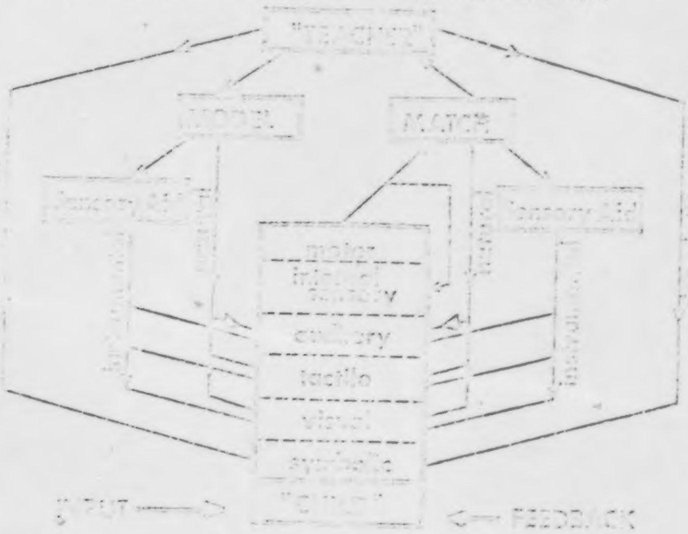
Hudgins, C. V., Visual Aids in the Correction of Speech. Volta Review 37, 637–643, 703–704, 1935.

———, The Research Program in Speech at the Clarke School. Volta Review 54, 355–362, 1952.

———, The Response of Profoundly Deaf Children to Auditory Training. J.S.H. Dis. 18, 272–288, 1953.

Nickerson, R. S. and Stevens, K. N., Teaching Speech to the Deaf—can a Computer Help? I.E.E.E. Trans. on Audio. and Electroacoustics, 21, 445–455, 1973.

Possible mechanisms for imitative speech behavior.


MODEL
MATCH
motor
auditory
tactile
INPUT
FEEDBACK

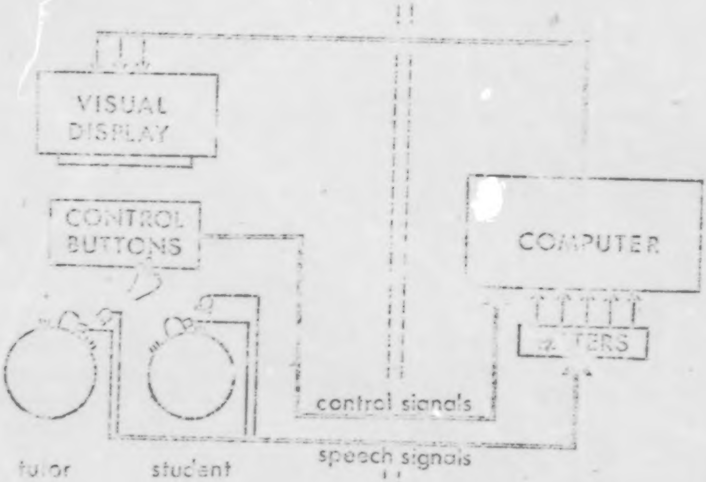

VISUAL DISPLAY
CONTROL BUTTONS
COMPUTER
FILTERS
control signals
speech signals
tutor
student

FIGURE 2.—Block diagram of computer-based system of speech training aids. Speech signals from microphones and vibration detectors are analyzed by the computer and the results are used to generate pictures on the display. Control is accomplished from a button box in front of the display.

A COORDINATED PROGRAM OF SPEECH DEVELOPMENT AND IMPROVEMENT—DESIGN, PROBLEMS, AND NEEDS

Patricia Archambault, M.E.D., Coordinator of Speech Program,
Clarke School for the Deaf, Northampton, Mass.

I. Introduction

Fundamental to the educational approach at the Clarke School for the Deaf is the philosophy that optimal development of oral skills requires continuous use of speech for everday interpersonal communication. Such a philosophy obviously demands a strong emphasis on speech instruction and remediation.

The purpose of this presentation is to review the speech program at the Clarke School, to discuss the problems encountered, not only by this program, but by all programs aspiring to develop oral communication skills in hearing impaired children, and to suggest areas in which speech analyzing instruments may find fruitful application.

II. Description of the Speech Program at the Clarke School for the Deaf

A. SPEECH CLASS

Every child in the school is scheduled for 45 minutes of daily instruction in speech development and improvement. An attempt is made to group each speech class in terms of the children's hearing loss, speech intelligibility, age and maturity, similarity of problems and academic achievement. Voice quality, articulation and speech rhythm are the major areas of concern. A multisensory approach; i.e., auditory, visual and tactile techniques, are usually necessary in all speech teaching activities. Classes consist of no more than eight children.

Although both synthetic and analytical approaches are used within all three departments, the former receives considerable attention in the first and second years as the children are guided in the use of pleasant voices and approximated speech within a rhythmic time envelope. Some very basic analytical work is also included within the framework of syllables. More intense instruction on articulation in the 3rd, 4th and 5th years is continued, with emphasis on formation and development of sounds and remediation of problems as they occur.

The Northampton consonant and vowel charts are used as the basic system of orthography, although students gradually acquire a sound understanding of Thorndike and Webster dictionary markings. Consistent attempts are made to relate word recognition in printed form to sound.

Speech rhythm is particularly stressed in Middle School speech classes, with appropriate remediation of other problems provided. Very often the children's difficulties become more pronounced during these years (9–13) due to growth in language, maturation, expansion of subject matter and preadolescent interests.

Upper School students generally evidence a high level of motivation and a positive attitude toward speech improvement. Instruction includes remediation but might be more accurately described as a time of refinement of the various parameters of speech production.

Each speech teacher and child in the Middle and Upper Schools receives a suggested lesson plan weekly which focuses on the more common speech problems of deaf children. Other material and learning activities are available at request. Since teachers of academic subjects teach a speech class also, there is a strong awareness of intelligible speech in all classes.

B. SPEECH LAB

In addition to speech class, approximately 50 children are scheduled for speech lab every seven weeks. The tutorial periods are 20 minutes in length and carried out by the assigned or volunteer graduate student teachers as part of their required speech practicum. Children are selected primarily on the basis of speech needs, but teacher referrals and student requests are also considered. Audio tape recordings are made on each child, jointly evaluated and subsequent short-term training goals established for each child. Follow-up recordings are made to assess progress and revision of objectives. Developmental or remedial activities are prepared by the tutor or provided by the speech department. Each booth is equipped with a Grason-Stadler group hearing aid, microphone, mirror and chalkboard.

As suggested, the tutor can also use a variety of sensory aids for the purpose of diagnosis, evaluation and remediation.

C. REPORTING AND EVALUATION

Daily reports are made after each lab session and a summary prepared at the end of each 7-week period for each child. These become a part of the child's speech record and are a subsequent source of information for future lab assignments. An attempt to maintain communication with the speech teachers, teachers of academic subjects and those in charge of dormitories is made to facilitate transfer of learning.

A speech intelligibility test is administered biannually to children over eight years of age which provides a rough indication of the child's speech progress. Each speech tape sample is spliced onto the child's cumulative speech record and provides an excellent source of study for teachers, student teachers, researchers and others interested in increasing their understanding of the speech development of deaf children.

D. OTHER ACTIVITIES

Related activities, which hopefully influence the child's speech progress, include a televised newscast three times a week, oral reports, cheerleading and specific programs planned by various teachers. Fortunately, speech instruction and correction is extended from the classroom and lab into less formal situations such as the dormitories, dining rooms, field trips and athletic competition with hearing students.

III. NEEDED IMPROVEMENTS COMMON TO ALL SPEECH PROGRAMS

A. DIAGNOSTIC PROCEDURES

Presently, diagnostic evaluations are subjective and time-consuming. Degree of accuracy varies with the listening skills of the auditor, and even when such skills are optimally developed, the margin for error may be great. Typically, a deaf child has several weaknesses—one area affecting another—such as poor breath, pitch and velar control, compounded by articulatory omissions, distortion and substitutions. Obviously, diagnosis of such weaknesses requires several hours of intensive listening by the tutor or teacher. Tests of articulation are helpful but provide little or no information on such areas as temporal features and voice quality. Since the time factor is so great and the process itself so subject to errors, individualized training goals are often delayed, hastily established and/or inappropriate to the specific needs of the child.

Objective diagnostic procedures easily and quickly administered with capabilities of quantitative measurements are vitally needed by every speech teacher. More accurate information might then be obtained and maintained throughout the child's years in school. Specific training goals and remedial activities could thus be implemented and updated according to each child's progress.

Diagnostic and prescriptive teaching methods would also improve. In a subjective situation, students often resort [illegible] defensive techniques in an attempt to disguise the problem cited by the teacher. For example, the teacher may say, "Your voice is all in your nose." The child reacts by lowering his level of intensity and the teacher replies, "That sounds much better." Positive reinforcement for such defensive techniques, whether it be pitch or intensity, may then create an additional problem or poor habit. It is time to remove the guesswork from evaluation procedures and children's gross trial and error attempts at correction.

B. TEACHING PROCEDURES FOR SPEECH DEVELOPMENT AND IMPROVEMENT

Traditional methods of teaching speech to deaf children are often highly effective when employed by experienced and well trained teachers. Unfortunately, skilled speech teachers for all hearing impaired children are not available. Too frequently the inexperienced teacher lacks necessary developmental and remedial techniques and relies heavily on a trial and error approach. Feedback and reinforcement to the pupil may be delayed, inaccurate or vague. The use of instrumental feedback, however, as an aid to the teaching process should serve to reduce the ambiguity and delay, accelerate the developmental and remedial processes and improve the efficiency of less experienced teachers.

Visual displays for teacher models and student feedback are certainly no substitute for a good teacher of speech, nor will they produce dramatic results in an ineffective speech program. The acquisition of intelligible speech and functional oral communication skills is a slow, gradual and longterm process. Instrumentation and technology, however, may serve as another source of information and hopefully improve and enhance the teaching methods. They are certainly no panacea for all speech weaknesses but will allow the child to receive direct and instantaneous information relative to his speech production. The information may be simply "Yes" or "No," with the "How" supplied by the effective speech teacher. The practice material and drill provided will substantially reduce the child's guesswork. How often have you corrected a child's speech by saying, "No, that's not right." The child tries three or four various attempts and finally one is acceptable. The crucial question is "Can he repeat the successful speech production five or ten times in succession?" Too often the answer is "No"! Obviously, the child is modifying his articulators, for example, but really not knowing what he is doing to produce the correct results. It is indeed unfortunate when the teacher responds "Wonderful" to an attempt and then proceeds to other aspects of the lesson.

Visual displays and instrumentation will allow the child to self-practice, deduct information and receive accurate positive reinforcement as to what he is doing through visual, tactile, auditory and kinesthetic sources.

C. INADEQUACY OF INDIVIDUALIZED INSTRUCTION

Another consideration is the difficulty of providing each student with sufficient daily individualized instruction. Speech classes designed for group activity afford eight students no more than five minutes each for individualized instruction within a typical 45-minute period, assuming the children talk more than the teacher. Other tutorial type speech classes are structured so that the teacher individually works with approximately three students while the remaining members of the class complete written assignments. Such a waste of precious time!

A speech lab, such as that at the Clarke School, staffed by graduate students, cannot provide remedial tutoring to the entire student population at any one time. Also, 20 minutes a day is certainly insufficient to meet the needs of students with severe speech problems. It is regrettably speculated that the students use the remaining hours in the day practicing their poor habits!

The use of several visual displays, however, would allow children to concentrate on their weaknesses with minimal teacher supervision and intervention. This could be implemented not only in the lab and speech classroom, but extended in to other classes, the dormitory and home situation.

D. TRANSFER OF LEARNING TO EVERYDAY COMMUNICATIVE SPEECH

The ultimate goal of any program of speech development and remediation is, of course, transfer of learning from the speech class or lab to all situations requiring oral communication. To successfully achieve results, total commitment and direct involvement is usually required by all who associate with the child throughout the day—teachers, houseparents, parents, friends, etc. The child's attitude, awareness of his needs and willingness to try to internalize learning is also a very crucial factor, as well as his desire and confidence to use speech in all activities. For reasons too lengthy to explore, this process of carry-over is unfortunately not always realized. In out-of-school activities, there are innumerable opportunities for the development of spontaneous verbal communication skills but often result in the practice of faulty speech habits for time periods greater than are spent in remediation.

Small, portable and easily operated instrumental aids, individualized to the needs of the students, used for remedial practice and drill in both formal and informal situations may serve to facilitate this process of transfer. Accurate, immediate and frequent feedback would then be available without constant teacher intervention.

IV. SUMMARY

In summary, a variety of visual displays used within an effective speech program with implementation and follow-up by adequately prepared teachers may help to meet the needs described and improve: (1) diagnostic procedures; (2) speech training goals; (3) evaluation of progress; (4) remediation; (5) individualized instruction; and (6) transfer of learning.

They should not be viewed as shortcuts to speech improvement, but rather as aids to the present methods of speech instruction.

DESIGN AND DEVELOPMENT OF SIMPLE, LOW-COST SPEECH TRAINING DEVICES

Marc Damashek, Research Engineer, Clarke School for the Deaf, Northampton, Mass.

1. Introduction

The speech training devices described in this paper have been designed and built at the Clarke School where they are currently being used in the speech training program (S.A.R.P. #18). This paper will describe their purpose and principles of operation and discuss the overall rationale and usefulness of such devices. Plans for future work will also be outlined.

Our aim throughout this work has been to produce a family of small and inexpensive electronic devices which can distinguish between properly and improperly produced speech features, and can be used in that capacity as speech practice aids.

2. Design Objectives

a. All instruments presently in use and those in the planning stage use visual indicators [mostly in the form of low-cost, low-power light-emitting diodes (LED's)].

b. All device designs stress small size, low cost of construction, and low power consumption.

c. All designs stress simplicity of use (minimum handling) and overall durability.

d. The actual construction methods used make any needed repairs simple and straightforward.

3. Devices in Use

A. /s/-INDICATOR

The /s/-indicator (Fig. 1) is contained in a plastic box which measures approximately 2¾″ x 4″ x 1½″; it is powered by a 9-volt transistor radio battery which has a life expectancy of about six months. Total cost of components is approximately $25. The external features of interest are the push-button, which must be held in to turn the device on (eliminating the possibility of accidentally draining the battery when not in use), and the indicator light. The /s/-indicator discriminates quite well between the sounds /s/ and /ʃ/ by counting zero-crossings in the audio waveform: the discrimination criterion is internally adjustable. The /s/-indicator has proven to have high motivational value in addition to its tutorial value—there is often a contest among students in a class to see who can make it light up. Presently, four /s/-indicators are being used in the school.

B. NASALITY INDICATOR

The nasality indicator is almost identical in appearance to the /s/-indicator. A small rubber acorn at the end of a plastic tube is placed at the nostril opening; the other end of the tube enters the analyzing box. The nasality indicator is quite sensitive to the opening and closing of the velum, and the LED lights accordingly. This device works well, but several of the children who have used it have objected to the tube in their nose. This is understandable, and we are working on an inexpensive substitute which can be held to the outside surface of the nose instead.

C. FLOW-MODE VOICING INDICATOR

The flow-mode voicing indicator (Fig. 2), is housed in a box 3¾″ x 6¼″ x 2″, also powered by a 9-volt battery. Total component cost is approximately $50. This device uses a set of 32 light-emitting diodes (LED's) to represent the presence of voicing in a one-second-long speech sample. The duration of each voiced segment of the sample is given by the number of contiguous LED's that are lighted. The display operates in the manner of an electric billboard, where the pattern in the lights moves from right to left across the array until it encounters the left-hand end, where it stops. The pattern in the lights is always left-justified and the student can compare it with a standard pattern drawn for the purpose by the teacher. It is thus useful for practising rhythmic patterns, for instance. This type of display has wide application to speech features other than voicing.

4. FUTURE DEVELOPMENT

The flow-mode type of display is applicable to the display of the time history of any binary (yes-no) variable. In addition, two or more lines of LED's can be placed one under the other for a simultaneous display of several features at a time. A further logical extension is the use of a large array of LED's, say 32 x 15, with which it will be possible to represent continuously variable (non-binary) speech features, such as pitch. We are presently working on such devices. We are also developing a general-purpose flow-mode display, into which any one of several feature extractors can be plugged.

Recent developments in electronics have made it imminently possible to build the functional equivalent of a popular small computer (Digital Equipment Corporation PDP-8/E) in a box the size of the voicing indicator, powered by a single battery. Such a microcomputer would make the prospect of doing complex speech analysis with a portable speech-training device quite feasible, and very exciting indeed.

5. DISCUSSION

The aids which are in use have met all the design objectives outlined in Section 3. Of particular interest are their small size, low power consumption and the method of construction of these devices. Their small size is made possible by the use of integrated circuits, which incorporate scores of transistors and other electronic components in a plug-in package approximately 3/4″ long and 1/4″ wide. These integrated circuits have the concomitant advantage of requiring an extremely small amount of power to operate—some of them require as little as a millionth of a watt; it is thus possible to use batteries, with operating lifetimes ranging up to six months or more, while satisfying the criterion of size. The physical construction of each circuit board makes use of a computer-assembly technique known as wire-wrapping, whereby wired connections between points on the board are made not by soldering the wire at its two ends, but by tightly wrapping the wire (and any other wires to which it connects) around a square cross-section metal post. A special battery-operated gun is used for the wrapping operation. The connections are physically much stronger than soldered connections and, more importantly, the technique leads to a five-fold speed-up in the overall wiring process. The circuit components (resistors, capacitors, etc.) can be soldered to small plastic plugs; both these plugs and the integrated circuits can be plugged into sockets which are already wired together on the circuit board. (Fig. 3). Thus, a malfunction in any single component may, at worst, necessitate making a new plug-in component module, which is a ten-minute operation. Trouble-shooting and repair are greatly simplified.

None of the speech training devices described will teach a child the rudimentary mechanics of speech production without the guidance of a teacher. It is necessary that a speech teacher make sure that the child understands what constitutes proper performance; the child may then begin regular, unsupervised practice, with periodic checking by the teacher.

The regular-practice phase of learning speech does not require constant teacher supervision. In learning to play a musical instrument it is not necessary for the teacher to be present at every practice session. Similarly, in the rehearsal of speech skills, it is only necessary that the student have information on the adequacy of his performance and be able to correlate good performance with appropriate motor habits. A program of unsupervised practice has the obvious benefit of freeing the teacher for the critical initial phase of speech teaching. It should also be clear that the use of such practice devices cannot be carried on in haphazard fashion; we stress again that they do not do away with the need for a speech teacher. It is essential at the outset that clear goals be set for each child with whom they are used and that some program of regular checking and evaluation be established. A pilot study with the /s/-indicator (see S.A.R.P. No. 19) has suggested that student-teacher interaction remains an important factor in the effective use of these devices; the study has further suggested that, with proper guidance, students using the /s/-indicator can improve the quality of their /s/-sound.

One of the principle areas of further work at Clarke School will be the development of teaching guidelines and evaluative tests, since the optimum usage of these speech training aids is by no means self-evident.

6. SUMMARY

We have designed and built several kinds of inexpensive, portable speech-training devices. These devices give immediate visual reinforcement to the proper production of certain speech features. It is emphasized that they must be used within a structured program which includes teaching and evaluation; however, because of their simplicity and ease of use, they are ideally suited to unsupervised practice. Their low construction cost makes them attractive for use in speech programs with limited funds.

7. ACKNOWLEDGEMENTS

The work described here has been supported by the Grant Foundation, the Fleischmann Foundation and the Pfeiffer Foundation.

REFERENCES

Boothroyd, A. Damashek, M., Development of Small Speech Training Aids for the Deaf—a Progress Report, S.A.R.P. #18, The Clarke School for the Deaf, March 1975.

Boothroyd, A. Use of the "S" Indicator for Unsupervised Drill—a Pilot Study, S.A.R.P. #19, The Clarke School for the Deaf, March 1975.

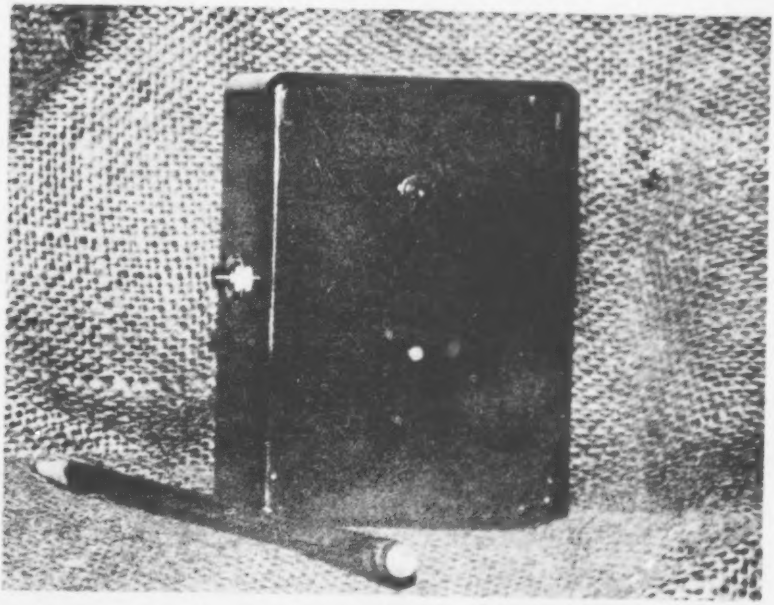


FIGURE 1.—The instantaneous "s" indicator. To operate this unit, the button on the left must be held in. Sounds are picked up by an electret microphone (lower center). Any sound whose zero-crossing rate exceeds a preset criterion causes illumination of the light emitting diode (upper center). A classroom version of this device uses an incandescent lamp in place of the light emitting diode.

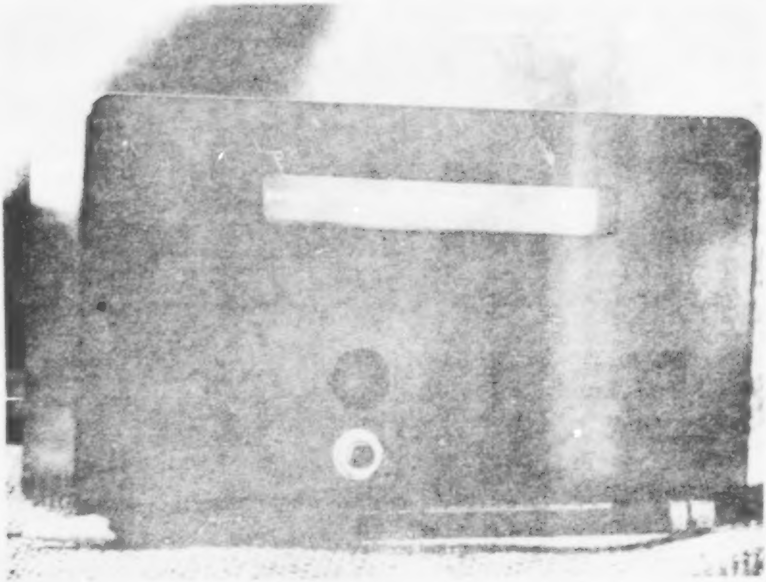


FIGURE 2. The flow-mode voicing indicator. This is designed for rehearsal of single rhythm patterns. The pattern "flows" across the display from right to left and stops when it reaches the extreme left. A single press of the button clears the display and readies the device for a new input. If no input is received for 60 seconds the unit automatically switches itself off. The time "window" is 0.96 seconds.

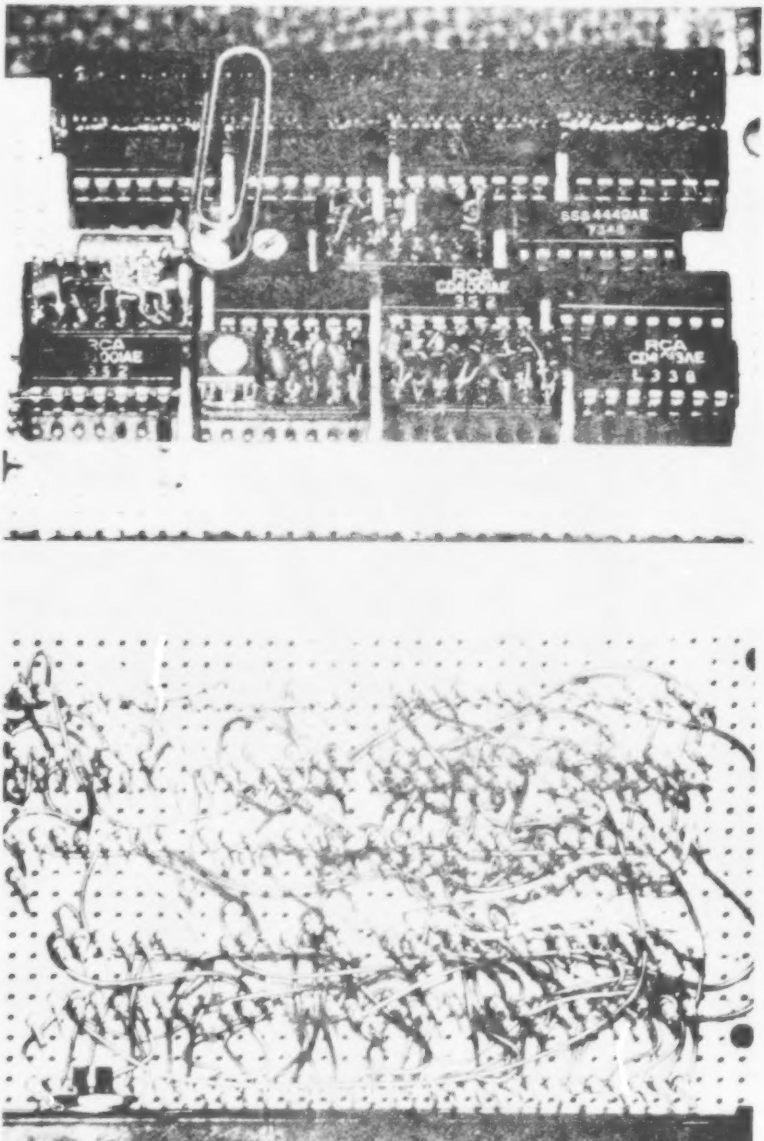

SSB4449AE
7348
RCA
CD4001AE
332
RCA
332
RCA
L338

FIGURE 3—Internal details of the flow-mode voicing indicator.

REFLECTION—IMPULSIVITY IN DEAF CHILDREN OF DEAF VERSUS HEARING PARENTS

Robert I. Harris, Ph. D., University of Rochester, Medical Center
Rochester, N.Y.

In the last ten years a rapidly growing interest has occurred among developmental, clinical, and behavior modification psychologists in identifying ingredients which contribute to impulse control or reflection-impulsivity. Impulse control is conceived as a part of cognitive style which relates to other aspects of a child's personality organization. (*1*) Such aspects are ability to plan ahead in a careful and organized manner, tolerate frustration, sublimate aggressive and sexual impulses into socially acceptable outlets, delay one's needs and wishes for a more rewarding long-term plan, and utilize intellectual energies so as to enhance the chance of coping with a rapidly changing society.

The present study attempts to identify ingredients that contribute to the development of impulse control in deaf children. The study has three important bases. First, Schlesinger and Meadow (*2*) found that deaf children at one residential school had an incidence of emotional disturbance five times that of normally hearing public school children. Second, while Rainer, Altshuler, Kallmann, and Deming (*3*) found no difference in the incidence of schizophrenia among deaf versus normally hearing mental patients, significantly more impulse control disorders were found in the deaf patient population. Third, little attention has been given to systematic or research aspects of impulse control in deaf children. Many previous studies, which reported such characteristics as emotional maturity, short attention span, poor impulse control, and hyperactivity, across all ages of deaf samples, were only descriptive. (*4–7*) They provided no leads for helping a deaf child to modulate his impulses adequately.

As a result, a typical diagnostic evaluation of a deaf child includes no effective, well-standardized techniques to link attentional and impulse control deficits to treatment plans.

The educational literature on deafness does show a way to find what contributes to the development of impulse control. This approach compares deaf children of deaf parents with those of hearing parents. (*8–14*) These studies indicated deaf children of deaf parents to be superior to those with hearing parents in all aspects of linguistic competence except speech and lipreading. In these latter skills no difference occurred. Do deaf parents provide a compensation for absence of auditory input? These educators stated that the deaf parents' use of early manual communication appreciably facilitate deaf children's later learing of English. Whether deaf children of deaf parents have better impulse control was not explored.

By comparing impulse control in two groups of deaf children, those with deaf versus hearing parents, additional evidence might be obtained. The findings could carry us a step closer in understanding how impulse control is acquired and in finding how deaf children may develop it more fully.

PROBLEM

The primary objective of this study is to learn how the hearing status of parents affects impulse control in deaf children. Deaf children of deaf parents were hypothesized to show greater impulse control, as reflected on various measures, than deaf children of hearing parents.

METHOD

Subjects.—324 deaf children, 50 from deaf and 274 from hearing parents, were selected from four northeastern schools for the deaf. All subjects had: (1) An onset of deafness no later than two years; (2) a hearing loss of 70 decibels or more; (3) no other educationally significant handicapping conditions, and (4) an age of 6 to 11 years.

Procedures.—Each child was individually administered in order the Raven Coloured Progressive Matrices (*15*); the Matching Familiar Figures Test (*16*); and the Draw-A-Man-Time Test. The session took about 15 to 20 minutes.

Parent questionnaires were mailed to the parents of each child to collect data on: (1) parent hearing status, (2) socio-economic status (SES), and (3) methods of communication practiced at home, and (4) other family variables.

Measurements.—(1) The Matching Familiar Figures Test is the index of reflection-impulsivity. It consists of 12 items, each composed of a picture of an object (e.g., teddy bear or tree) and then six choices, including a duplication of that picture plus five variations. The task is to locate the duplicate. Errors and response times were recorded.

(2) The Raven Coloured Progressive Matrices Test yields an estimate of a child's intelligence. It was selected for its brevity and easy understanding of instructions.

(3) The Draw-A-Line-Time Test was administered to analyze two variables analogous to errors and response times in the Matching Familiar Figures Test (MFF) to determine the generality of the Matching Familiar Figures Test (MFF) as a measure of impulse control. Time to draw a whole man and the raw score based on Goodenough-Harris Point Scale (*17*) were recorded.

SULTS

Results were first analyzed to examine the relation of parent hearing status to impulse control in deaf children. Deaf children of deaf parents obtained better scores on all four measures of impulse control than those of hearing parents. These results are summarized in Table 1.

Analysis of co-variance was used to remove the variance of age, socio-economic status and intelligence while testing the effects of parent hearing status on the four measures of impulse control. The results indicated that deaf children of deaf parents took significantly longer response times and made significantly fewer errors on the Matching Familiar Figures test (MFF) than those of hearing parents. Also, those with deaf parents took significantly higher raw scores on the Draw-A-Man-Time Test than the children of hearing parents. However, the group differences in terms of time to draw a whole man was not significant at the 0.05 level.

Another important part of the results concerned the role impulse control plays in academic achievements. Regardless of parent hearing status, response latency on the Matching Familiar Figures test (MFF) was positively correlated with many subtests of the Stanford Achievement Test, Metropolitan Achievement Test, and Gates Primary Reading Test. The correlations ranged from 0.23 to 0.76. Also, errors on the Matching Familiar Figures test (MFF) was found to be negatively correlated with many subtests of these achievement tests. Correlations ranged from −0.21 to −0.70. In other words, the reflective deaf children tended to obtain higher achievement scores than the impulsive children.

DISCUSSION

The results support the idea that deaf children of deaf parents acquire greater impulse control than deaf children of hearing parents. Some kinds of compensation must occur in families with deaf parents for absence of auditory input. This apparent compensation appreciably dilutes the negative influence of hearing loss upon development of impulse control. The question is therefore raised as to whether alternative sensory modalities, e.g., the visual modality or the visual-proprioceptive factors in the use of early manual communication, may help a child acquire impulse control.

Some educators may say, and I would be inclined to say, that the better impulse control of those with deaf parents results primarily from the use of manual communication by deaf parents. Manual communication during the infant years of life may help a deaf child develop cognitive and syntactic structures in order to control his impulses more constructively. However, this condition may not be the sole factor leading to better impulse control. Other factors favoring better impulse control among children of deaf parents are: (1) deaf parents' readiness to accept the hearing loss; (2) normal socialization resulting from a family and neighboring context where other adults and sometimes children have similar handicaps, (3) deaf parents' ability to modify traditional child-rearing practices to meet a deaf child's personality growth needs optimally, and (4) deaf parents' acumen in discerning a child's hearing problems. The results of the present study are being further analyzed to investigate some of these possibilities.

It is generally known among the educators of the deaf that deaf children of deaf parents tend to acquire better verbal language than those who have hearing parents. Could it be true that better impulse control on the part of those who have deaf parents is the crucial factor which helps a deaf child accomplish academic work better than those who do not have deaf parents? The significant correlations between the impulse control and school achievement measures support this idea.

Implications are present for the education and mental health of deaf children. First, educators and mental health specialists of the deaf might like to incorporate the Matching Familiar Figures test and related measures as a part of a deaf child's psychoeducational and psychological evaluation. Versions of this test (*18-20*) exist for children of ages 3 to 5. Impulse control scores for children this young would provide diagnostic leads regarding their academic potential. These leads would give specialists a one to three year head start in developing specific programs to help a deaf child improve his control of motor behavior. By the time the child is six or seven years old, he may be more ready for his school work.

Second, remedial programs like those of Meichenbaum and Goodman (*21*) have tremendous potential for deaf children. Impulsive hearing children were found by them to exercise less verbal control over their motor behavior and to use private speech in a less instrumental fashion than reflective children. They developed a self-rehearsal training paradigm to help an impulsive child learn how to talk orally to himself in a directive, self-regulatory fashion. They found two conditions necessary for engendering self-control in impulsive children: (1) a self-instructing agent after whom the child can modal and (2) rehearsal in self-instruction. The possible extension of Meichenbaum and Goodman's study to deaf children provide a challenging and provoking issue: can sign language and/or fingerspelling be used as an alternative or supplementary means for verbalizing self-instruction so as to control one's motor behavior and improve the modulation of impulses by a deaf child?

Third, investigators might like to investigate the relationship between teachers' and deaf children's impulse control. Yando and Kagan (*22*) found that children become more reflective when they have reflective teachers. What are the optimal modeling conditions for a deaf child? Which one or combination of the following models would optimally help a deaf child modulate his impulses constructively: (1) deaf parents, (2) deaf educators of the deaf, (3) hearing educators of the deaf, (4) hearing parents, (5) parents who are fluent in manual or total communication, (6) educators of the deaf who are fluent in manual or total communication, (7) parents who are reflective, or (8) educators of the deaf who are reflective?

In conclusion, the findings of this study have been enlightening regarding the role of parent hearing status upon impulse control in deaf children. However, the research questions and practical implications from the results are as challenging as the results themselves.

REFERENCES

1. Douglas, V. I. Sustained attention and impulse control: Implications for the handicapped child. In J. A. Sets and L. L. Elliott (Eds.), *Psychology and the handicapped child* Washington: U S. Government Printing Office, 1974.

2. Schlesinger, H. S., & Meadow, K. P. *Sound and sign: Childhood deafness and mental health.* Berkeley: University of California Press, 1972.

3. Rainer, J. D., Altshuler, K. Z., Kallman, F. J., & Deming, W. E. (Eds.) *Family and mental health problems in a deaf population.* New York: New York State Psychiatric Institute, 1963.

4. Altshuler, K. Z. Studies of the deaf: Relevance to psychiatry theory. *American Journal of Psychiatry*, 1971, *127*, 1521.

5. Levine, E. S. Youth in a soundless world. New York: New York University Press, 1956.

6. Zivkovic, M. Influence of deafness on the structure of personality. *Perceptual and Motor Skills*, 1971, *33*, 863–866.

7. Baroff, G. S. Rorschach data and clinical observations. In Rainer, et al. *Family and mental health problems in a deaf population.* New York: New York State Psychiatric Institute, 1963.

8. Brasel, K. Personal communication, 1975.

9. Charrow, V. R., & Fletcher, J. D. English as the second language of deaf children. *Developmental Psychology*, 1974, *10*, 463–470.

10. Corson, H. J. Comparing deaf children of oral deaf parents and deaf parents using manual communication with deaf children of hearing parents on academic, social, and communicative functioning. Unpublished doctoral dissertation. University of Cincinnati, 1973.

11. Meadow, K. P. Early manual communication in relation to the deaf child's intellectual, social and communicative functioning. *American Annals of the Deaf*, 1968, *113*, 29–41.

12. Stevenson, E. *A study of the educational achievement of deaf parents.* Berkeley: California School for the Deaf, 1964.

13. Stuckless, E. R., & Birch, J. W. The influence of early manual communication on the linguistic development of deaf children. *American Annals of the Deaf*, 1966, *111*, 452–460, 499–504.

14. Vernon, M., & Koh, S. D. Early manual communication and deaf children's achievement. *American Annals of the Deaf*, 1970, *115*, 527–536.

15. Raven, J. C. *Guide to using the coloured progressive matrices: Sets, A., Ab, B* (revised order). London: H. K. Lewis & Co. Ltd., 1965.

16. Kagan, J. Impulsive and reflective children: significance of conceptual tempo. In J. D. Krunboltz (Eds.), *Learning and the educational process.* Chicago: Rand McNally, 1965, pp. 133–161.

17. Harris, D. B. *Children's drawings as measures of intellectual maturity.* New York: Harcourt, Brace & World, Inc. 1963.

18. Harrison, A., & Nadelman, L. Conceptual tempo and inhibition of movement in black preschool children. *Child Development*, 1972, *43*, 657–668.

19. Lewis, M., Rausch, M., Goldberg, S., & Dodd, C. Error, response time, and IQ: Sex differences in cognitive style of preschool children. *Perceptual and Motor Skills*, 1968, *26*, 563–568.

20. Ward, W. Reflection-impulsivity in kindergarten children. *Child Development*, 1968, *39*, 867–874.

21. Meichenbaum, D., & Goodman, J. Training impulsive children to talk to themselves: A means of developing self-control. *Journal of Abnormal Psychology*, 1971, *77*, 115–126.

22. Yando, R., & Kagan, J. The effect of teacher tempo on the child. *Child Development*, 1968, *39*, 27–34.

TABLE 1.—IMPULSE CONTROL MEASURES IN DEAF CHILDREN AS A FUNCTION OF HEARING STATUS OF PARENT

	MFF seconds [1]	MFF error [2]	DAMT seconds [3]	DAMS score [4]
Deaf Ss of deaf parents:				
X	[5] 20.0	[6] 12.6	170.9	[6] 25.9
S.D	12.2	7.1	108.9	9.1
N	50.0	50.0	50.0	50.0
Deaf Ss of hearing parents:				
X	14.4	15.2	151.4	22.6
S.D	8.1	7.3	131.4	9.4
N	274.0	274.0	273.0	274.0

[1] The time (seconds) which lapses between the presentation of the MFF standard figure and the selection of the 1st variant made by S to match it.

[2] The sum of incorrect invariants selected by S to match the standard figure on the MFF. The maximum of number of errors per test item is 6.

[3] Time (seconds) by S to draw a whole man.

[4] Raw score on the draw-a-man-time test (DAMT). A higher score indicates greater number of features included.

[5] p <0,001.

[6] p <0,01.

ASSESSMENT OF EMOTIONAL AND SOCIAL FUNCTIONING OF YOUNG HEARING IMPAIRED STUDENTS

Judith Burroughs-Keith, Ph.D., Callier Center for Communication Disorders, Dallas, Tex.

The assessment of emotional development in hearing impaired children has been an enigma that has challenged but eluded researchers, teachers, and psychologists over the years. With interest in testing and personality differences increased in the 1960's, Levine(*10*) stated that the deaf tend to lag behind the hearing in social maturity and its related behavior and adjustments. Levine cogently proposed that personality assessment is best carried out by a well-trained psychologist who is familiar with the deaf population. The tools recommended for utilization were essentially those basic ones developed for hearing persons with adaptation and specialized interpretation for deaf persons. In conclusion she listed 17 areas of needed research in personality and adjustment of the hearing impaired. During the past 15 years studies have been generated toward all of these objectives. The literature abounds with references citing use of specific measures of personality functioning and study of the social-emotional development of hearing impaired children. Yet when one examines closely the controversial findings of studies, it becomes apparent that there are few definitive answers regarding patterns of social-emotional development and no proven measures which can stand alone in describing personality functioning.

This rather harsh indictment of recent progress is related to the nature of the problem. For the relatively small population of hearing impaired persons with such a wide range of individual differences, research methodology based on normative sampling techniques is woefully inadequate. To match subjects on such variables as age, sex, degree of hearing loss, intelligence, etc. becomes an almost impossible task. Since these factors are so critical in the development of the hearing impaired, findings which ignore them must be questioned when applied to individuals.

A more fruitful area of investigation has involved the comparison of individual case studies or observations of specific groups of data available on the sequence normal development. The work of Furth,*(7)* Schlesinger and Meadows,*(11)* Blanton, Nunnally, and Odom,*(2)* Altschuler and Rainer,*(1)* and others have shed much light. However they have not resulted in specific tools or technology that make the job of the diagnostician easier. Thus dependence upon the knowledge, skill, and rapport of professionals remains paramount today in the assessment of social-emotional development of hearing impaired children.

Let us reexamine what is known about assessment to gain insights that can equip us as individuals—teachers, psychologists, parents, administrators—to better approach this difficult task. The key to useful assessment of any type is the identification of the question to be answered, and the purpose of any clinical or school assessment should be to provide greater understanding that leads to growth. Use of testing simply to label or screen-out has come to be recognized and condemned for its "dead-end street" results. The critical question that is now asked prior to assessment is "in order to do what?"

Four factors can be identified that are tantamount to successful assessment—(1) skill in utilizing a variety of assessment techniques; (2) a strong basic knowledge of normal child development; (3) experience with hearing impaired children; and (4) good clinical judgement—qualities which all pertain to the professional rather than the tools.

These are actual questions that have arisen within our Educational Division at Callier and approaches we have used.

(1) How can we routinely screen for behavioral or emotional difficulties that need special attention in educational programming?

This question was asked by the teachers within the framework of our systems approach to individualizing instruction for young hearing impaired children.(*3*) The information would be incorporated into the Emotional Functioning section of the comprehensive Profile of Behavior(*4*) which was the assessment component designed to facilitate developmental individualized programming. Since the measures in the Profile were used for objective documentation of progress, an instrument with quantifiable results was desirable.

For this question we chose the Bristol Social Adjustment Guides.(*13*) This was not a widely used or statistically proven measure. However, it offered several advantages for our specific purpose. The information is supplied by classroom teachers' underlining all items on the test form that apply to a specific child. By scoring with overlays a diagnostic profile is generated of items that indicate certain types of maladjustment. The total number of indications of maladjustment are divided into two broad categories: Underactivity and Overactivity. Within these categories there are further divisions including: Inhibition, Withdrawal, Depression, Anxiety to Children, Hostility to Adults, Unconcern, and Restlessness.

One merit of this measure is that teachers are involved in the assessment based on classroom behavior. Also no value judgements are required of the teacher, one simply underlines statements that describe the child's observed behavior in various situations. It is then possible to discuss the results from the standpoint of criterion behaviors for desirable change in the areas indicated. Thus the measure does lend itself to specific classroom programming and evaluation.

Over a four year period the measure has shown excellent face validity as substantiated by clinical observation. There is also statistical evidence for reliability across time and across raters who are regular classroom teachers. We have found the means for our sample of six to eight year old hearing impaired children to be approximately 13 for girls and 15 for boys (on the 1956 form.) Means reported in the test manual for normal hearing children are slightly lower at 10 for girls and 12 for boys.

An illustration of an actual case may best convey the use of the measure. One of our little boys was shown by the Bristol screening to have an extremely high number of indications of hostility to adults, and the finding was substantiated by the observations of the teacher and psychologist. In a team staffing, a plan was designed to reduce this hostility. In addition to trying to establish a warm positive environment and relationship in the classroom, the teacher gave him a wristcounter and asked him to count the times that adults smiled at him. Within a very short period of time he had shaped adult behavior quite effectively and was distinguishing between "genuine" and "fake" smiles. Of course this simple technique was not the total answer, but it did introduce a positive wedge into what had been a vicious circle of negative reinforcement. By the end of the year the Bristol documented a significant drop in hostility to adults and also other areas of maladjustment.

Other measures used include the Child Behavior Rating Scale (*5*) done by the parents as well as a ratnig made by the psychologist after his individual testing session with the child. We try never to rely on only one measure. Moreover we attempt to gather information regarding a child's behavior from as many persons who have contact with him in as many different situations as possible. Another rule of thumb is to re-assess frequently since change is inherent and expected.

(2) What is the most effective type of motivation for this child?

A Parent Information Form mailed to parents contained the following questions: What are the child's favorite activities at home? If your child were offered a reward, what would he like best? What is the best way to discipline your child at home? The answers provided very useful clues to effective reinforcers for the children at school.

In addition the psychologist rates the child, again from the individual testing session, as to his optimum type of reinforcement reflected in task performance. We have designated three general and not mutually exclusive types of motivation: (1) Concrete—the child works best when given a tangible reinforcer such as toys, candy, money, tokens, etc.; (2) Social—works best for praise, clapping, smiles, or other person-responses; (3) Intrinsic—performs tasks out of his own internal interest and enjoying of success.

A third measure of motivation comes from a measure of work habits developed at Callier called the Newman Rating Scale. This scale taps the teachers' ratings of the child's level of motivation as well as other aspects of work-approach skills. Such self-developed measures can be very effective in evaluating the specific objectives of your own program.

(3) How can we pinpoint social-emotional development in order to insure appropriate experiences in the child's educational program?

Difficulty results from the frequent discrepancy between behavior in school and underlying feelings and emotions. The most effective approach to this question is through careful observation by teachers and other professionals who are well-grounded in child development. An excellent resource for development in this area is Schlesinger's (*11*) chapter which reviews Erickson's eight stages of social development and discusses the possible effects of deafness on these stages. One must remember that each child's experience with these stages and the effects of deafness will vary. The important understanding to be gained is the nature of the developmental sequence.

Objective measures such as an experience checklist supplied by parents, the Vineland Social Maturity Scale (*6*) which can even be gathered over the phone, and the Callier-Azusa Scale (*12*) developed for deaf-blind children have also been useful in supplying additional input in this area. Scores on these measures are of much less value than the analysis of the scatter of behaviors at the developmental levels.

(4) How can I handle this child's disruptive behavior in my classroom?

This is probably the most critical and frequently asked question for a school psychologist. To answer this question effectively requires an on-going investment of time and effort by both the psychologist and the teacher. Constructive answers involve the use of all of the types of assessment techniques at our command: (1) case history—can save duplication of efforts and provide much understanding; (2) observation—probably the most effective tool the psychologist can utilize in such situations when applied to classroom, playground, cafeteria, home, etc.; (3) interview—ranging from talks with teachers to parent conferences to play sessions with the child; and (4) testing—most useful when viewed as work samples rather than predictors of ability or pathology. Within the individual testing situation, I use measures such as the Wechsler Scale, (*14*) the Leiter, (*9*) and the Hiskey (*8*) to observe the child's attention, motivation, anxiety, tolerance for frustration, relationship to authority figure, and other affective behaviors in various cognitive tasks. Human figure drawings and play are among the most useful techniques with young deaf children.

Along with the data gathering process must come group staffings or team meetings in order to establish workable plans of action. In addition it is essential to re-evaluate continually. The assessment processes must be concurrent and interactive with educational programming.

It is tempting to fantasize that an armament of assessment tools appropriately standardized on hearing impaired populations would provide golden answers to problems in this area. Actually, we may assess more astutely than we are willing to admit. Our intuition is usually a very good barometer of social-emotional relationships if we cultivate and trust it. We are able to bolster those subjective impressions with the basics of the assessment process. The real crux of the matter may lie in dealing with the resulting information. How do we cope with documented problematic behavior in the classroom? How can we make education more humanistic? How can we create positive emotional environments and relationships with our children?

REFERENCES

1. Altshuler, K. Z. and Rainer, J. D. (Eds.): *Mental Health and the Deaf: Approaches and Prospects.* Washington, D.C.: U.S. Department of Health, Education, and Welfare, 1969.

2. Blanton, R. L., Odom, P., and McIntyre, C.; Symbolic and Linguistic Processes in the Deaf. Final Report, Research Grant No. RD-2552-S, July, 1971.

3. Burroughs, J. R. and Powell, F. W. Can We Systematically Meet the Needs of All Deaf Children? *Peabody Journal of Education*, 51, *3*, 171–179, 1974.

4. Burroughs-Keith, J. and Gluck, M. R.: Profile of Diagnostic Information Designed to Describe the Individual Learner. *Peabody Journal of Education*, 52, *1*, 33–42, 1974.

5. Cassell, R. N.: *The Child Behavior Rating Scale.* Los Angeles: Western Psychological Services, 1962.

6. Doll, E. A.: *Vineland Social Maturity Scale.* Circle Pines, Minnesota: American Guidance Service, Inc., 1965.

7. Furth, H. G.: *Deafness and Learning: A Psycho-social Approach.* Belmont, California: Wadsworth Publishing Company, Inc., 1973.

8. Hiskey, M. *The Hiskey Nebraska Test of Learning Aptitude.* Lincoln, Nebraska: Union College Press, 1966.

9. Leiter, R.: *The Leiter International Performance Scale.* Chicago: Stoelting, 1948.

10. Levine, E. S.: *Psychology of Deafness.* New York: Columbia University Press, 1960.

11. Schlesinger, H. S. and Meadow, K. P.: *Sound and Sign: Childhood Deafness and Mental Health.* Berkeley: University of California Press, 1972.

12. Stillman, R. A. (Ed.): *The Callier-Azusa Scale.* Dallas: Callier Center for Communication Disorders, 1974.

13. Stott, D. H. and Sykes, E. G.: *Bristol Social Adjustment Guides.* San Diego: Educational and Industrial Testing Service, 1956.

14. Wechsler, D.: *Wechsler Intelligence Scale for Children*—Revised. New York: Psychological Corporation, 1974.

THE DEVELOPMENT, USE, AND INTERPRETATION OF THE 1973 STANFORD ACHIEVEMENT TEST, SPECIAL EDITION FOR HEARING IMPAIRED STUDENTS

Raymond Trybus, Ph. D., and Carl J. Jensema, Ph. D., Office of Demographic Studies, Gallaudet College, Washington, D.C.

BACKGROUND

Shortly after the inauguration of the Office of Demographic Studies, Annual Survey of Hearing Impaired Children and Youth, as a national statistical center for the education of hearing impaired children, in May 1968, the Office's National Advisory Committee recommended that the Office study the output of the special educational system as well as the input to this system. The input data, which includes the characteristics of the students, their teachers, and the programs they attend, were of crucial importance then and remain so today. The natural complement to such data is a description of the output of the educational process, of what it is that hearing impaired children learn as the result of our efforts and dollars. With the guidance of this national committee and technical consultants in the field of testing, the Office set out in 1969 to collect data on the academic achievement of hearing impaired children across the United States.

These early data confirmed the suspicions of many that existing instruments such as the Stanford Achievement Test were not entirely adequate for this purpose, despite their wide acceptance among educators of the deaf. A variety of modifications (which, as it turned out, were also generally improvements) were made to the Stanford testing materials and procedures, and national data on this modified instrument were collected in 1971 from 19,000 hearing impaired students.

While this represented a substantial improvement over the earlier data, the very fact that the data were more reliable pointed up more clearly the need for further adaptation to account for the wide differences in achievement in different subject matter areas, which were observed in the large majority of hearing impaired children tested. As it happened, at about this same time the publishers of the Stanford Achievement Test (SAT), Harcourt Brace Jovanovich, Inc., were in the process of developing a new, updated edition of the SAT. The previous edition, which had been employed in the 1969 and 1971 national studies, had been published in 1964. A survey conducted by the Office in the fall of 1972 confirmed that the SAT was the most widely used standard achievement test in special educational programs for the hearing impaired in the U.S. The survey results indicated that oı 29,000 hearing impaired students who were to receive an achievement test during that 1972-73 school year, 22,000 or about 75 percent would be receiving the SAT. On the basis of this finding, and with the guidance of the National Advisory Committee and a host of other advisors and consultants (including Dr. Richard Madden, the senior author of the SAT), the Office decided to conduct one final national project to develop reliable national norms for hearing impaired children. It was further decided that this project would employ the new 1973 edition of the SAT, modified as necessary to produce more accurate and useful results. Throughout the project the Office worked in close collaboration with the publishers, who hold the copyright to the SAT. All the modifications in the test materials, procedures, and scoring services were done with their agreement and permission, under the terms of a licensing agreement which will remain in force through 1981 between the Office of Demographic Studies and Harcourt Brace Jovanovich, Inc.

THE STANDARDIZATION PROCEDURE

The procedure began with a pilot study conducted in the spring of 1973, in which approximately 750 hearing impaired students were tested with the new 1975 edition of the SAT to determine its exact performance characteristics. The detailed results of this pilot project guided the myriad of decisions which were involved in the national standardization, which was scheduled for the spring of 1974. At the beginning of the 1973–74 school year a national stratified random sample of the special educational programs for the hearing impaired was drawn, stratified by the type of educational services offered and the size of the student enrollment. These selected programs contained approximately 10,000 hearing impaired students, or about one-fifth of the total national population of interest (schools which enrolled only mentally retarded deaf students or only preschool-age deaf students were not included in the definition of the population or in the sample of programs selected). The heads of these programs were contacted and the participation of their programs in this project was requested. Demographic information was eventually obtained on 97 percent of the total number of students in the sample selected. The schools were then asked to administer a screening test in February 1974, on the basis of which individual students were assigned to the proper level of content and difficulty for full-battery testing. The full battery of the 1973 Stanford Achievement Test, Special Edition for Hearing Impaired Students (SAT–HI) was then administered to students in the participating programs in April and May of 1974. A total of 6,873 students were tested; the difference between this figure and the total enrollment of 10,000 students represents primarily students who were below age 8 and therefore ineligible for testing. Some portion of this group consists of students who were absent on the testing days, who left the school before the tests were administered, or who were enrolled in the small number of programs which closed during the year, or which dropped out of the project, reversing their earlier decision to participate.

Before either the screening tests or the full battery tests were administered, the question of training of the test administrators was addressed in the following manner. Each of the participating schools was asked to send a representative to one of three regional training workshops which were held in Washington, D.C., in St. Louis, Mo., and in San Francisco, Cal., during December 1973 and January 1974. These three identical workshops consisted of a full day of presentation, lecture, discussion, and question-and-answer regarding the test materials, procedures, problems, and purpose.

A copy of a specially-devised "Information Packet" was distributed to each of the 125 participants, and served as the basic text and reference for the workshop activities. After attending a regional workshop, each representative returned to his/her school, and conducted a similar training session for each teacher or other test administrator who would be involved in this project. A copy of the Information Packet was provided to each prospective test administrator for these local training sessions. In addition, the Office's telephone number was provided to each participating school with instructions to call collect if there were questions or problems, or if any aspect of the procedures required further clarification. An uncounted but substantial number of such calls were received, suggesting that the participants were reading the materials provided and were trying to observe the requirement for uniform procedures among all schools involved.

While these testing procedures were in progress, a subsample of approximately 13 percent was selected on a random basis from the 10,000 students in the overall sample. Two further sets of information were sought from the parents and from the classroom teachers of the students in this subsample. The survey forms embraced a wide variety of items, including the communication methods used by and with the child, the nature and extent of hearing aid usage, the family constellation and history of deafness, the educational, occupational, and financial status of the parents, and some of the child's personal and educational history. The requested information was received from 75 percent of the teachers and 60 percent of the parents.

Upon completion of the data collection, therefore, the Office had assembled what is probably the largest and most detailed data base on the characteristics and educational performance of hearing impaired children in the United States. Analyses of the data in this file are now under way, conducted both by staff members of the Office and by outside researchers working in collaboration with the Office. Publication of the results is expected to begin in late summer or early fall of 1975.

THE USE AND INTERPRETATION OF THE SAT–HI

While one major purpose of this project was to provide a complex, diversified, and flexible data base for a wide variety of research activities, an equally important purpose was to provide a reliable, meaningful instrument which could be used nationwide to assess the academic performance of hearing impaired children.

To this end, the Office entered into a licensing agreement with the publishers, under the terms of which the test materials will be available from the Office of Demographic Studies, and computer scoring service from the publisher, at least through 1981. Appropriate descriptive, explanatory, and ordering information is available upon request from the Office. During the 1974–75 school year, the first since the standardization project, test materials for 15,000 students have been sold to schools and classes for the hearing impaired across the country.

The advantages of the SAT–HI over the regular edition of the SAT or over other standardized achievement tests are basically two. First, the SAT–HI will provide more accurate measurement because of the technical modifications which adapt it to the known performance characteristics of hearing impaired children. Second, because of the standardization, norms are available for comparing an individual's performance to the national distribution for hearing impaired students, as well as to the national distribution for hearing students which is generally available on various tests. This gives a flexibility which is not available with other instruments at the present time.

Once the test has been administered and scored for the number of correct responses in each subtest, the interpretive process can begin. Conversion from these raw scores to other, more meaningful scores can be done either by hand or by computer through the service available from the publisher. The following kinds of scores, along with their uses briefly described, are available.

(1) *Grade equivalents.*—These scores are based on hearing students and indicate the typical grade placement of children obtaining the particular score. For example, a grade equivalent of 4.3 on the reading comprehension test means that this child is performing the same as the average hearing child who is in the third month of the fourth grade. This type of information can be very useful in determining appropriate grade placement for children who are being integrated or mainstreamed into regular classes with hearing children.

(2) *Scaled scores.*—This is a new score developed by the SAT authors, based on hearing children, which is intended to be a measure of growth, while the grade equivalent is a measure of status or placement. The unique advantage of this score is that results from different forms and different levels of the SAT, within a single subject matter area, are directly comparable. This is a special advantage when hearing impaired children in the same class must take different levels of the SAT–HI because of differing screening test results. The scaled scores are equal interval scores, which means that the amount of growth represented by an increase from 130 to 140 is the same amount of growth as that represented by an increase from 165 to 175. This, by contrast, is not true of grade equivalents. The amount of growth or change between grade 1.0 and 2.0 is not the same as the amount of growth between grade 7.0 and grade 8.0. A limitation of this scale is that it cannot be used to compare performance across subject matter areas—only within one area such as reading or vocabulary at a time. Scaled scores gain their value when testing is repeated a second or subsequent time, permitting the measurement of academic growth.

(3) *Hearing impaired percentiles based on age.*—These scores were developed by the Office of Demographic Studies; they are currently available only in photocopy format, but will be published by fall 1975. These percentiles allow one to determine how well the individual is doing compared with other hearing impaired children of the same age. These tables require that one first obtain the raw score, then convert it into a scaled score. Then, knowing the scaled score and the student's chronological age, one can obtain a percentile ranking. For example, a 13-year old student who took Level 2 of the SAT–HI had 65 out of 93 items correct on the combined (A + B) reading subtest. This raw score gives him a grade equivalent of 2.9, meaning that his test performance is equal to the performance of the average hearing child in the ninth month of the second grade. This same raw score of

65 yields a scaled score of 130. By itself, this score provides little information; upon retest, however, it will become possible to figure a reliable growth score. Now, knowing that he is 13 years old, and has a scaled score of 130 the percentile rank obtained from the table is 65. This means that his reading performance is somewhat above the average for hearing impaired children his age who are in special educational programs; his score is better than that of 65 percent of his age-mates, while 35 percent outscore him. This percentile score compares him to all of his hearing impaired age-mates, regardless of which of the 6 levels of the SAT–HI they have taken.

(4) *Hearing impaired percentiles based on test level.*—The explanation of these scores is the same as that in (3) above, except that the reference group is all hearing impaired students who took the same test level (for example, Level 2), instead of all hearing impaired students of the same age. These norms correspond approximately to the norms based on grade placement which are used with hearing children. Thus, hearing children in 6th grade may be compared to other hearing children in 6th grade, even though their ages may differ somewhat. Similarly, here the hearing impaired child is compared to others who were tested at the same difficulty and content level. The grade concept could not be used since many special education programs do not group their students by grade, as is commonly done with hearing students. It is these percentile ranks which are printed as Nat'l HI Percentile Ranks on the reports received by those who use the publisher's computer scoring service. These scores, instead of indicating how well a student is doing for his age, indicate how well he is handling curriculum material in the test, compared to other hearing impaired children who are facing the same curriculum content.

(5) *Local percentiles.*—These are similar to (3) and (4) above, except that the comparison group is other hearing impaired children in the same school or school system who took the same test level. These scores are useful only if the number of students within a school or system who take a given test level is relatively large, say 50 to 100 or more.

(6) *Stanines (local or national HI).*—These are values on a nine-point scale of normalized standard scores; they are tied directly to percentile ranks and represent the same basic information. Whereas percentile ranks are small, unequal units (bunched up in the middle of the range), stanines are larger, equal units. They have the advantage of avoiding the appearance of over-precision which percentile ranks can have, and are thus useful for presenting detailed information in an easily understood manner to persons not familiar with the intricacies of psychometric measurement. These stanines can be related to percentile ranks based either on the national distribution or those based only on students within the local school or school system.

(7) *Item content analysis.*—While the SAT and SAT–HI are "norm-referenced" tests, that is, tests designed to permit comparisons of an individual to some specified comparison groups, the test results can also be used in a content-referenced or criterion-referenced manner. This is accomplished by examining the performance of individuals or, preferably, of groups or classes of individuals, on specific

test items or item clusters. For example, on the math computation test the items may cluster into those involving addition, those involving subtraction, etc. Examination may show, for example, that a class of students answered almost all addition items correctly, but that most students answered most subtraction items incorrectly. This diagnostic information is immediately useful to the teacher in concentrating further instruction and drill. By comparing item content to stated curriculum objectives, and examining student performance, one can determine whether the desired level of mastery has been achieved by an individual or a class. In this way, one can obtain the benefits of both norm-referenced and objectives-referenced testing in a single procedure.

SUMMARY

In this paper the background and procedures of the standardization of the SAT-HI for hearing impaired children has been described. The supplementary information available has also been noted, by way of describing the data base of the Office of Demographic Studies which is available to qualified researchers for their own research or for work undertaken in collaboration with the Office, assuming always the confidentiality of the individual persons and schools who are the sources of the data. The availability of the test materials and scoring services has been described, and considerable attention was given to the use and interpretation of the various kinds of scores and output data which can be derived from this testing procedure.

While the SAT-HI does not provide all the kinds of educational performance information on might need and desire, within the limitations of its design and purpose it is a more adequate instrument than others which have not been similarly adapted to the performance characteristics of hearing impaired children and subsequently standardized on a representative national sample of hearing impaired children in special educational programs for the hearing impaired.

THE LANGUAGE PROGRAM AT THE OREGON STATE SCHOOL FOR THE DEAF: PRESCHOOL THROUGH HIGH SCHOOL

Harlan D. Conkey, Ed. D., Associate Professor of Audiology at Oregon State University, Department of Speech; William M. Erickson, M. Div., M.A., Language Coordinator at the Oregon State School for the Deaf; James E. McCarr, M.S., Assistant Director, Teacher Training Program for the Deaf at Lewis and Clark College; Billy J. Peck, M.S. Ed., Director of the Oregon State School for the Deaf; Benjamin J. Purvis, Ph. D., Director of the Instructional Resources and Materials Center at Oregon State University

INTRODUCTION

In Virginia Heidinger's "Short Course: Teaching Language to the Hearing Impaired in the 70's" she concludes with the statement, "the language curriculum should be concept oriented and built upon a spiraling approach. The concepts to be developed rather than the rules of the language should be the basis of the curriculum." (*1*) The strategy team that has guided the development of such a language program at the Oregon State School for the Deaf would like to share the results with you. In so doing we trust that you may gain some ideas that will help you build your curriculum and school wide language program.

A project like we are about to describe has to be born in someone's heart and mind. It was Mr. Bill Peck, who as assistant director some years ago, conceived the idea of Patterned Language. He experimented with it, refined it, tested it in the classroom and kept open to teachers feedback so that it was finally adopted throughout the school.

Title I Director, Dr. Harlan D. Conkey, Ed.D., has given the vision, encouragement and supervision to make this project move forward. His office has funded a half time position at our school for the past five years known as Language Coordinator.

Our first Language Coordinator, Mr. James McCarr, was responsible for the creation of our Language Achievement Test. When he moved on to Lewis and Clark College, as assistant director of Teacher Training Program for the Deaf, we retained his services as Language Consultant on the strategy team that was formed.

Our present Language Coordinator, Mr. William M. Erickson, has supervised the computerizing of the test results, and the splitting of the test into two batteries. In the summer of 1973, he led the team of seven teachers employed by Title I to develop our Written Language Curriculum Guide.

Dr. Benjamin Purvis has contributed greatly to the refinement of our Language Achievement Test as Computer and Statistical Consultant. We attribute his contribution "above and beyond the call of duty . . . (hours for which he was not paid)" to the emotional tie he has to the project. He is the father of a third grader at our school.

Time and money are required to develop anything worthwhile. So after investing more than 8,000 hours and $40,000 we are ready to share with you the five components of our school wide language program.

1. PATTERNED LANGUAGE

Patterned Language is a program of linguistically and developmentally oriented materials. It includes two major areas of interest: (1) the phase of development of communication skills generally agreed upon as those experienced by most hearing children; and (2) the three units of Patterned Language materials designed to emulate those phases of development through the printed word symbol system.

Unit I is designed to help a child (as young as two years) to attach meaning to the printed words and begin communicating with those words. It can begin initially in the home with the mother who follows a step by step illustrated instructional manual, or it can be introduced when the child first enters school. In either case it will help him establish immediate positive printed word communication with his parents (family), teacher, tutor, etc.

The development of a beginning working vocabulary and the ability to communicate with it is accomplished through the proper use of printed word cards, and two Patterned Language aprons. The word cards are color coded to match the apron pockets. The color coding is used to begin to establish the concept of word classification and correct word order.

The instructional manual for this first unit provides for early introduction of yes and no concepts. Also on a single word basis the child will be exposed to and learn the use of: (1) names of people and pets, (2) basic desires and activities—want, eat, drink, etc., (3) names of objects (4) where concepts, (5) time concepts.

The child acquires the ability to use these word-concepts while he is involved in the communication process. This communication revolves around natural language learning situations which exist in his everyday environment rather than from rote or stilted activities. The topics of communication must center around the people, pets, activities, objects and places which are important to the child. This of course provides the child with immediate pay-offs and increases his desire to communicate.

The main objective of Unit II is to help the child who has a beginning working vocabulary to begin putting those words together in their proper order and relationship. A secondary objective is to begin introducing the four basic sentence patterns around which the remaining materials revolve.

After each new word is introduced to the child through Unit I and acquired by him, the color-coded cards are placed in color-coded card files. The card files sit in a metal tray in front of and below a slot chart. This arrangement permits the parent, teacher, or tutor and the child to build sentences one word at a time from the card files to the slot charts above. The individual card files provide maxim flexibility so any sentence pattern desired can be generated.

Very shortly after the child begins to properly utilize the Patterned Languages slot chart, he is introduced to his own small color coded word-tray. The word-tray permits the child to begin using the small word-cards from his language apron to build syntactical word strings.

Unit III of Patterned Language is built around a wall chart that hangs above the blackboard. The chart is divided into eight sentence areas: (1) sentence transform (2) subject + modifiers (3) verb + direct modifiers (4) object + modifiers (5) where (6) when (7) conjunction (8) end of sentence punctuation.

In the beginning the wall chart sections are positioned to correspond with the card files in Unit II, so basic sentence patterns can be consistently presented. Then the child is gradually weaned from the Slot Chart to this third Unit. This structured approach helps the child to build confidence through consistency. After the child has developed the necessary confidence, the teacher will begin to help him reposition specific sections of the chart to generate sentence transforms.

2. OSSD WRITTEN LANGUAGE CURRICULUM GUIDE

The team of language teachers that developed this loose-leaf guide began their task by taking "The Roberts English Series," volumes 3–9, and analyzed what concepts were being taught to hearing children. Then, they went through these concepts and either added to or deleted from the list, so that we had left the concepts believed to be necessary for deaf students to learn the English language. The whole committee had to approve each addition, or deletion of these concepts.

Next, each team member was given an area of responsibility in writing up these concepts into measurable terminal objectives. Each terminal objective was reviewed by the entire team, and approved or revised. One page is used in the GUIDE to list each terminal objective, the exit level or performance required of a student on a post test to move on to the next objective, and suggested resources and materials in our IMC to teach the objective.

Accurate records are an essential part of this school wide language program. These records have to be individualized since our goal is to allow each student to move at his own rate through the curriculum. Each pupil has been given a green $8\frac{1}{2} \times 11$ notebook with his name on it where his records are kept. This notebook follows him through his school career. Materials to be included are a monthly uncorrected original composition, and a record of the curriculum material covered each year.

Each level in the curriculum has a simple checklist. Only two items are recorded for each objective: (1) the date the objective was met, and (2) the exit level of performance on the post-test. Since ours was a spiraling curriculum, concept would be introduced at some level, and might be repeated as many as five times in the spiral. Therefore, we established that the exit level of performance for a new concept would be 70 percent accuracy, and each review of that concept would raise the ELP 5 percent.

One numbering system for the objectives reflects this recycling of a concept. Thus in Level 6, the third objective on the list is simply numbered 3, for this is the first introduction of the concept into the spiral. The next objective is numbered "4:rl." The "rl" means this concept is being reviewed for the first time. The sixth objective has the number 6:r3. This indicates that this objective is being reviewed for the third time, and the learner must have an 85 percent score on the test to exit from this objective.

"Our Written Language Curriculum Guide" was designed to make changes as simple as possible. Thus the looseleaf format. Revisions can be of various sorts: (1) addition or deletion of objectives, (2) rewording of objectives, (3) addition of new information under "Suggested Materials and Resources". Feedback is encouraged from all who use the Guide.

At least once a year (during the summer months) the revisions are typed up by the office staff, and notebooks are updated. In this way we keep the Guide as the road map followed in the classroom.

3. THE OSSD LANGUAGE ACHIEVEMENT TEST

At the 1973 Indianapolis Convention, "A Progress Report on the Development of the Oregon State School for the Deaf Language Achievement Test" was given. The report covered the development of the test in great detail.(2) A decision was made in June of 1973 by the strategy team that the 1972–73 edition of the test should be split in half. With 328 exam questions and a possible 378 exam points, it was too bulky. So, in the fall of 1973, the School Language Coordinator split the test.

The goal of the split was to achieve two halves that were balanced in point value section by section. The initial move was to split a section by odd-even number, if that was possible according to the nature of the section. This split was then subjected to a comparative study for balance based on the item analysis data from the computer on the spring of 1973 results.(*3*) Both the difficulty index and the discrimination scores were reviewed. If one half of the test was of significantly greater difficulty than the other adjustments were made to bring about the best possible balance. The resulting batteries A and B both have eleven sections with a total of 165 questions and 194 possible exam points.

The question was raised by the strategy team, "Is there any one of the eleven sections of the test that correlates well enough with the total score as to be a short form of the test itself?" Anything above 0.850 is considered a good correlation. Section B had a correlation coefficient of 0.929 and Section I 0.926 in relation to all the test. So, we believe that either of these Sections, B or I, can be used as a tool for a quick reference on the language abilities of a new pupil who enters our school mid-year.

The students' responses on the test are transferred to scanning sheets that are fed to the computer at Oregon State University. A variety of very interesting data is then available to us on the print-outs. We receive a rank ordering of students in the total test sample by batteries. The rank ordering by departments was used by the intermediate teachers this year to group their students in a nongraded program according to language ability for next year. An individual profile for each pupil allows the teacher to find the areas of weakness that need attention. A comparison study is made on students within each class without regard to the battery they took since these batteries are equally weighted, reliable and valid. A comparison is made for each student within the class of his section and total scores on the spring and fall tests. Among the comparative data is given a T-value score which is the indicator of growth of the class through the school year. Our school language trophy is given out on Awards Night to the class from 4–12 grades showing the most improvement through the year. This T-value score gives us an objective basis for the Award.

We are willing to share our test with other programs for the deaf. We will provide the test batteries, with instructions for administration. You give the test and return them to us. We will score it, send it to the computer, and return the print-outs to you. This can be done at the cost of \$2.50 per pupil per test administration, of \$5 per pupil per year on a fall-spring testing program.

A complete Cross-Reference Guide has been developed for the Written Language Curriculum Guide. Single concepts such as noun phrases are shown in their spiral through the Guide. By correlating this Cross Reference to the Language Achievement Test, it has become possible now for a teacher to concentrate on the areas of weakness that an individual student may have anywhere along in his intermediate or high school years.

A tailor made program for the needs of each child is the goal of prescriptive teaching. Mark's problem may be the use of prepositions, while Susan may have trouble with personal pronouns. David may not be able to identify the antecedents to pronouns, while Mary may know how to use only coordinating conjunctions for sentence transforms. All these facts can be revealed through the Individual Profile we receive on each pupil in our computer data after each test administration. Now, we are equipped to zero in on the specific terminal objective in our Written Language Curriculum Guide so that Mark, Susan, David or Mary may be helped to develop a better written language.

4. IMC MATERIALS

The Instructional Material Center at the Oregon State School for the Deaf has a great quantity of language materials. Yet these materials lay on the shelf unused if a teacher has to go hunting in the haystack for the needle he or she needs to get the point across. Therefore, the Language Coordinator was given as one of his responsibilities this year, the correlation of these materials with the specific objectives of the Written Language Curriculum Guide. The task will continue into future years for it is time consuming. However, it greatly facilitates teacher preparation and greater utilization of resources at hand.

Let us illustrate the variety of materials already correlated from Level 5. Objective 16 has resources listed as follows: Roberts English Series Book 5, page 112; Roberts Workbook Book 5 pages 66, 68, and 75; and filmstrip #330 in our IMC on preposition. Objective #32 includes pages from Roberts testbook and Workbook, plus the Project Life filmstrip Unit 11, Section B. (We have correlated all the Project Life materials with our Curriculum Guide). Objective #34rl, in addition to the references in Roberts material, lists pages in the Teacher Manual and Student Workbook of the "Lessons In Syntax" written by James McCarr.

5. HIGH SCHOOL GRADUATION REQUIREMENTS

The Oregon State Department of Education now requires that each high school within the state write up its own graduation requirements. Two of our teachers, Jean Teets and Sandra Green, have developed a list of language requirements which all students are now required to pass in order to receive a diploma from our high school.

The language subarea of these graduation requirements has nine survival level program goals. These goals are listed below. The student will: (1) communicate through the written medium, (2) use correct spelling and neat penmanship in his writing, (3) write a letter, (4) use a dictionary, (5) communicate his needs in writing, (6) follow directions, (7) make proper introductions, (8) write answers to given questions, (9) use common prefixes and suffixes.

Each of the above program goals is broken into a list of competencies and corresponding performance indications by which a student is judged. We have in dittoed form copies of these language area requirements for graduation that we will share upon request.

Students who complete their four years in our high school, but who have not passed the graduation requirements do not receive a diploma. Any time following their departure from our school that they can prove they can meet the requirements, or pass something equivalent like the GED or courses at a community college, the high school diploma will be awarded.

BIBLIOGRAPHY

1. Heidinger, Virginia, "Teaching Language to the Hearing Impaired in the 70's", a dittoed short course at Oregon College of Education, October 14, 1974.

2. Conkey, Erickson, McCarr, and Purvis, "A Progress Report on the Development of the Oregon State School for the Deaf Language Achievement Test", pp. 969–711 of the 1973 PROCEEDINGS of the Indianapolis Convention.

3. Erickson, McCarr, Purvis, "Rationale Used in Splitting the OSSD Language Achievement Test", a Title I Report available through OSSD.

PROJECT SPANISH FIESTA—AN INTENSIVE PROGRAM DESIGNED TO MEET THE NEEDS OF SPANISH SPEAKING PARENTS OF PRESCHOOL DEAF CHILDREN

Suzanne Aasbo, M.A., Preschool Supervisor, St. Francis deSales School for the Deaf, Brooklyn, N.Y.

There is a trite saying, "You can lead a horse to water, but you can not make him drink." What I am going to present to you is one approach for leading the horse to water and getting him to drink.

Those of us working with deaf children in New York's urban educational settings have long been aware of the difficulties in maintaining active parent programs. However, in recent years, we have been confronted with an additional set of problems. These problems have arisen as we tried to incorporate bi-lingual children and their parents into the school's existing programs. Actually, the term "bi-lingual" is incorrect in this instance. What we are talking about are children of Puerto Rican descent who come from homes where Spanish is the language spoken. In the majority of cases, the Puerto Rican Parent's command of English is poor and the Puerto Rican hearing sibling's use of English at home is minimal. The ramifications of this fact are many, creating a necessity for change in several areas.

When St. Francis de Sales began to receive its first influx of Puerto Rican children in the early 1970's curriculum modifications were made. For example, names of fruits and vegetables eaten by Puerto Rican families and unfamiliar to American teachers were included. We agonized about the logic of teaching speech reading to children who were only exposed to Spanish at home.

In 1973, after a year of staff preparation, St. Francis de Sales became a total communication school. We hoped that along with total communication's other obvious advantages, it would be an aid to our Spanish speaking families. Evening sign classes for parents were initiated. One class was taught in Spanish.

To facilitate daily communication between school and home a staff member fluent in Spanish given the responsibility for phone calls and messages. Part of her schedule included interpreting at parent observations and assisting the intake staff with enrollment. Thus, initially, we did not anticipate any further difficulties. In short, we were still in the first stage of problem solving; the denial stage.

In the summer of 1973 St. Francis de Sales moved to a larger building. With additional space enrollment expanded. While the primary, upper, and transitional departments wrestled with the problems of assimilating older Puerto Rican children into existing classes, preschool was bearing the brunt of the population shift.

In 1972–73 ten out of fifty-three children in preschool came from Spanish speaking homes. By September 1974 preschool contained twenty children from Spanish speaking homes out of an enrollment of fifty-six. As the fall and winter months passed our enrollment of Puerto Rican preschoolers continued to increase.

Our school entered the next stage of problem solving: the awareness stage. We acknowledged that we had a real problem assimilating these children and their parents into our system. We tried our best to incorporate them. By this time we had two full time interpreters on staff. Messages went home in Spanish by the droves without effect. Our Puerto Rican parents did not take advantage of what the school had to offer. They did not appear at P.T.A. meetings, though interpreters were provided. Only a few came to sign class. One Spanish speaking parent attended Preschools' Parent Education course in 1973–74.

The Preschool Department has always maintained that the parent is the child's first and most influential teacher. New parents are urged to attend a weekly parent education course for twelve sessions. These three hour weekly meetings are under the direction of the preschool supervisor and school psychologist. The format is casual with emphasis on child management, communication skills, anatomy and physiology of hearing, etc. Group interaction and group support are encouraged.

In addition to the weekly parent education course for new parents all parents of preschool children are scheduled to spend four mornings a year observing their child in tutoring through the one way mirror, and participating in their child's classroom. During these visits educational guidance is given in a positive manner, and the parent is encouraged to call the supervisor with any questions she may have.

This approach to parent education, along with evening P.T.A. meetings, was considered to be adequate by both the preschool staff and our English speaking parents. However, it was not adequate for our Puerto Rican parents. Observation appointments were not kept. Repeated efforts to reschedule these non-participating parents failed. They simply didn't show up.

We reached the third stage of problem solving. We tried various methods of "coping". A Sister who had worked in educational facilities in Puerto Rico met with our staff to explain cultural differences between the Puerto Rican and American family. We tried to understand their culture and to change any negative feelings we might have. A class in Spanish was offered after school. Thirty-five teachers enrolled.

But the daily frustration continued. Teachers had to work with four year olds who brought bottles to school and who were not completely toilet trained. Many of these children were extremely immature and showed signs of poor diet and fatigue. Hearing aids were frequently unrepaired. Medical, dental and eye examinations were not completed. Clinic appointments for audiological evaluations were missed. The nurse, social worker and interpreters were carrying a back breaking load.

We instituted a breakfast program to provide some additional nutrition. An optometrist joined the staff as a consultant, and private funds for eye glasses were raised. As the number of Puerto Rican children enrolled grew, so did our frustration. We found ourselves increasingly forced to take on parent responsibilities.

This fall preschool decided to try a new approach. Project Spanish Fiesta, a three day workshop for Spanish speaking parents, was scheduled to be held at the school in November. We knew from the social workers' home visits that these nonparticipating parents seeming lack of responsibility was not based on lack of concern, but rather an inability to perform in a culture that was foreign to them. In many instances the obstacles we expected them to overcome were overwhelming. Any approach to "educating" these parents necessitated removing some of these obstacles.

We focused on fourteen Spanish speaking parents of preschoolers that entered in September and October. If we could get them to come to the school, and provide a pleasurable learning experience, they just might come back.

Project Spanish Fiesta was designed as a team effort. A social worker, Mrs. Norma Griffith, and an interpreter, Sister Muriel Bradley, did the field work. Mrs. Alyce Bernstone, an experienced nursery tutor, and I planned the program and functioned as group leaders. Contact was initiated by mail. The social worker and interpreter then visited the families to discuss attendance at the Fiesta. Participants' individual needs were accessed at this time. Transportation arrangements were made and the participants were informed of what time the bus would arrive at their door.

Preparations at school included provision for baby sitting of young hearing siblings. Teenagers in the upper department volunteered to man a classroom and a teacher took charge. We decorated a conference room in a festive manner and made arrangements for lunch to be served to the participants. Thus, we tried to anticipate and remove any obstacles that might prevent our Puerto Rican parents from attending.

But what did we hope to accomplish in three short days? We developed two sets of behavioural objectives. The first set involved affecting attitudes and feelings toward "parenting". The second set concerned "educating" the participants in the needs of the young deaf child.

In the affective domain, we sought to have the Spanish participant accept her child's deafness and begin to view herself as her child's first teacher. We hoped to change the parents' attitudes toward the school by convincing them that we were a trustworthy and caring resource. We wished to initiate feelings of warmth between the parent and her child's teacher and tutor. In addition, we had as a goal the formation of a sense of group esprit and the fostering of group support leading to friendships.

Our educational objectives included making the parent aware of the role of the school in the deaf child's life. We wanted to teach the participants communication techniques they could use with their deaf child within the family. We wished these mothers to learn the basics of good nutrition and child care. We also wanted them to see the importance of fostering independence in their child. Most of all, we wanted them to learn how to utilize school personnel.

With these two sets of objectives in mind we developed the format of the program. Three bi-lingual mothers of older deaf children at

St. Francis were asked to act as role models. These mothers had previously participated in our Parent Education Program when their children were in the nursery. They attended a day of orientation where they review the materials to be presented at the Fiesta and received coaching in communication techniques. The role models were very helpful to the leaders in establishing initial rapport and promoting change of attitude toward the school.

We chose fourteen overhead transparencies as the major vehicle for presenting information to the participants and promoting discussion. These transparencies were selected from a set entitled "Parent-child Communication; A Mediated Program Designed to Facilitate Communication Between Hearing Parents and Their Deaf Children," designed by the North East Regional Media Center for the Deaf, Amherst, Mass. A manual which accompanies the set proved helpful in suggesting ways to utilize the transparencies. As each transparency was presented the leader asked questions designed to focus the groups' attention on aspects of the visual aid which would lead to group discussion.

This transparency [1] portrays a situation in which some parents first suspect that their child might be deaf. Participants were asked "What's happening in this picture? What are the parents doing? Did you do something similar?" The role models set the pattern for communication techniques by relating in Spanish their experience and feelings when they first suspected their child's deafness. The interpreter translated the response in English for the leader so that she might respond in return. In this manner rapport was established and participants were encouraged to join in. The social worker participated as a member of the group and the co-leader noted responses for later discussion when the team met to evaluate each day.

Four of the transparencies chosen dealt with feelings about having a deaf child and the parents' role. Four others explored the special needs of the deaf child within the family. Three focused on the deaf child's place in society and three were designed to stimulate discussion on the parents' role in fostering independence.

Each of the transparencies was used to invoke discussion in both the emotional and educational areas.

For example, the leader showed a particular transparency of a group of mother's and their children and asked "Which one is the mother of the deaf child? Why do you say that?" It was interesting to see who the participants identified with. The question "How do you think the mother feels?" lead to exploration in feelings. The leader then asked: "What could the mother do to help her child in this situation?" Discussion of the parent's role in helping her child to be accepted by hearing peers followed.

In addition to the utilization of these excellent transparencies we presented a simplified demonstration of the anatomy and physiology of the hearing mechanism. We wished the participants to understand that their childrens' hearing loss could not be corrected surgically in order to dispell any false hopes. Our goal was to have them realize that their children would need to continue their education in a school for the deaf. A three dimensional model of the ear was used. Role models provided "feedback" on any information that was unclear during the presentation so that misunderstandings could be clarified. The group was given hearing aids to listen to and take apart. A discussion followed on the use of hearing aids. Each participant was also given a Spanish edition of the booklet entitled: "Tim and his Hearing Aid". Major points brought out in the booklet were discussed.

---

[1] Copies of the transparencies were deleted due to publication space limitations.

Another major goal that we hoped to achieve was to teach the participants communication skills. We gave the mothers 15 signs to practice as a group.

These signs were repeated in English and Spanish as they were demonstrated. The signs were reviewed each day. Role models and leaders used them casually throughout the day, whenever applicable. By the second day several of the participants were using some of the signs spontaneously in group discussion.

On the second day of the Fiesta each participant was escorted by a role model, acting as a buddy, to view her child in the tutoring booth and in the classroom. The buddy stayed with her participant to translate during the entire morning. The participants viewed their children eating breakfast and observed a formal lesson as well as a free play period. Teachers and tutors demonstrated positive interaction with the children, presenting a model for effective use of Total Communication and child management. A group discussion period followed the observation session.

We had prepared a very intensive program, but did we achieve our goals?

Eleven of the fourteen families in our original sample agreed to attend the Fiesta. Three stated that they were unable to come due to poor health and job responsibilities. Eight parents actually attended the program. They brought a total of eleven siblings with them. The social worker was able to reach one of the absent participants who had originally agreed to come. This was a father who cared for his family alone. He had begun a new job and was therefore unable to come. Two other absent parents could not be reached as they had no telephones. It was significant, however, that there was no drop out rate once the Fiesta started. Those who came for the first day of the program reappeared for the second and third, except for one mother who, being unable to continue, sent two teenagers living in the family to represent her.

Each participant received a fiesta schedule, written in Spanish, when he arrived. This schedule was discussed with the participants.

We began the first morning by administering a short questionnaire to the participants. It was written in Spanish and each question was read aloud. This questionnaire was designed as an evaluation measurement. We later readministered the same questionnaire at the end of the fiesta. Seven participants completed both the pretest and the post test questionnaires. Comparison of the pretest and post test indicates that change occurred in some of the participants. It is felt that a more effectively designed questionnaire would have enabled the participants to demonstrate more positive growth.

An evaluation form entitled "We want to know * * *." was filled out by our Puerto Rican mothers on the last day. Each question was written in Spanish and read aloud.

The results of this evaluation were gratifying. However, we suspect that poor design again influenced response. Question two was poorly stated. From knowledge gained during the Fiesta we feel that participants answered "yes" in order to be polite. Our role models informed us that several of the mothers initially feared the school, viewing it as a "sad" and "strange" place.

What we were not able to measure was the quantity and quality of interaction that took place between the participants and the staff during these three days. We did make a video-tape of some of the group discussions.

Initial interaction between leaders and participants, and between participants and role models, was hesitant. The group was uncomfortable with translation procedures. As initial shyness decreased and interest grew the communication patterns changed. The interpreter did less translating as the role models spontaneously took over. Several mothers with some mastery of English began to act as interpreters for each other. The group relaxed. Leaders found themselves attempting to use a few Spanish words, much to the amusement and delight of the participants.

Participants' interaction with each other increased. By the third day the leaders were able to introduce the topic for discussion and let the group progress with little interference. Many of the points the leaders wished to emphasize were made by members of the group.

Did we arrive at the fourth stage of problem solving; finding an effective solution? Since the Fiesta seven of the participants have visited the school for observation at least once. The eighth participant's child was ill on the day she was scheduled to observe. Five of these parents have attended a second observation day. In addition, several have brought other members of the family with them.

Teachers have stated that they have no problems in daily communication with these parents. Notes go home in Spanish and they respond. They call in and they write.

An additional side effect of Project Spanish Fiesta concerned the three role models' perception of themselves. Though all three agreed to help us they expressed anxiety about fulfilling their roles. After the project these women expressed great satisfaction. Two viewed themselves as adequate enough to apply for positions as teacher assistants at the school. One, who had begun to attend college with the goal of becoming a teacher, used her experience as a role model for a term paper. She got an "A" on it.

We got the horse to the water and we got him to drink. It now remains to expand this approach to include all new Spanish speaking parents of deaf children. We hope that some of this year's participants will be next year's role models.

MAINSTREAMING AND COMMUNICATION TRAINING—THE DELAWARE APPROACH

Edward E. Corbett, Jr., Community Education Coordinator,
Margaret Sterck School for the Hearing Impaired, Newark, Del.

Teachers today are better able to cope with an make provisions for individual differences of the children in the classrooms. With this in mind, the mainstreaming of hearing impaired children with emphasis on communication training is stressed. It results in a new concept for elementary and secondary education—that of mainstreaming hearing and hearing impaired children with the assistance of specially trained personnel as interpreter-tutors using total communication to interpret and explain everything that goes on in the classroom to give all children the same opportunities in education.

The term, "mainstreaming", is such a dirty one. Professionals in the field shun it. It is because they know that children who are being mainstreamed were left to chance. These children have to swim or sink, so to speak, without the special help usually afforded hearing impaired children. Not only that, teachers in regular classes were not properly trained to teach, much less cope with, hearing impaired children. The list goes on and on when you add all the negative aspects of mainstreaming.

In the seventies, we find states passing mandatory education laws that guarantee the right to education for all people. The laws are now being backed by court orders which say that every handicapped child has a right to an education. The question here is to determine what kind of an education should every handicapped child get—especially the hearing impaired.

The implication of the mandatory education laws is that handicapped children need not be educationally handicapped. By that I mean that the handicapped child's special needs can be met in their respective programs in special education—but, what about his educational and social needs? Psychological needs? Many hearing impaired children were and still are ill-prepared for independent living. It is because schools, classrooms, and/or buildings for handicapped children are so isolated—one reason as to why the educational and social needs of the hearing impaired are not being met. This brings to mind one quote: "For the hearing man, the whole world is his classroom; for the deaf man, education stops when he steps out of the classroom."

Mainstreaming holds promise of doing away with isolationism in programs for the hearing impaired. It must be carefully planned to assure quality education for the hearing impaired. Mainstreaming, in essence, means moving hearing impaired children away from thier segregated status in special education classes and integrating them with hearing students in regular classrooms with assistance of resource teachers, interpreter-tutors, and other supportive services. The evidence of its success is that it worked for students on postsecondary levels as pointed out at the National Technical Institute for the Deaf/Rochester Institute of Technology; California State University at Northridge; and a number of other community colleges. Therefore, why could it not work on elementary and secondary levels.

In Delaware, the concept of mainstreaming is being used in a different way. The school does not just place children in regular classes and provide them with interpreter-tutors but places emphasis on communication training.

The Delaware project hypothesis is that with total communication the concept of mainstreaming our hearing impaired children into regular classes is enhanced because the hearing children will see and accept the hearing impaired children for what they are, and, eventually, they will communicate with each other using total communication modes of communication. Let us examine the hypothesis in greater detail.

The schools involved with the mainstreaming and communication training program are: the Margaret S. Sterck School for the Hearing Impaired, Ogletown Middle School, and Jennie E. Smith Elementary School. They were deliberately constructed by the Newark School District adjoining each other. A corridor connects the Sterck School to both schools. There are approximately 950 students at Ogletown School, and 450 at Smith School.

Prior to the advent of mainstreaming and communication training program, the teachers in the participating schools were involved in two one-week workshops to discuss the mainstreaming components; nature of hearing and hearing loss; audiological terminologies and readings of audiograms; amplification; problems of deafness psychologically, socially, and educationally; total communication; interpreting techniques; and developments in education of the deaf.

Featured speakers from all disciplines on deafness were invited to share their expertise with the workshop participants.

Another workshop for the interpreter-tutors was held for two weeks. They received the same information as the teachers in regular classrooms, but they were exposed to effective interpreting and tutoring techniques.

Third, but not the least, several workshops were held to acquaint approximately 1,500 hearing students on problems of deafness, mainstreaming techniques, interpreting-tutoring programs, and training on communication techniques. The communication training part was conducted by a featured actress in Miss Mary Beth Miller who was formerly associated with the National Theatre of the Deaf. She discussed the communication components and why the deaf communicate that way.

This latter workshop did much to motivate the success of the mainstreaming program. One example is that approximately 700 students in regular classroom took courses on total communication techniques. Two periods a week were spent in teaching total communication during class hours to first, second, and third grade children for a semester. Another teacher worked with the fifth and sixth graders for a semester. It is interesting to note that the hearing children communicate utilizing total communication modes of communication without any inhibitions on their part.

After the workshops, a mainstreaming core committee was established. It consisted of teachers in participating schools, principals, guidance counselors and a coordinator to assess the mainstream readiness in each hearing impaired child. The criteria for mainstreaming was adopted from the "Recommended Educational Policies in Education of the Deaf" printed for the Conference of Executives of American Schools for the Deaf by Drs. Richard G. Brill, Edward C. Merrill, Jr., and Robert Frisina. The criteria are as follows:

1. Does the pupil use the receptive and expressive skills of communication (speechreading, language of signs, fingerspelling, speech, language, reading and writing) well enough to function successfully in a regular class program?

2. Are the pupil's social and emotional maturity levels average or above the average of hearing pupils in the regular class?

3. Can the pupil direct his attention to the assigned work and follow the directions given for doing the work?

4. Is the regular class enrollment small enough so that the teacher will have an opportunity to devote some of his time to helping the deaf or severely hard of hearing pupil solve his problems?

5. Will the deaf or severely hard of hearing pupil be seated in the regular classroom so that he has a good view of the teacher's (and the interpreter-tutor's) face when they are speaking? Will sound amplification be provided if the pupil can profit from its use?

6. Are the parents and other members of the family interested in having the deaf or severely hard of hearing pupil assigned to a regular class to the extent of helping him with his home assignments? Will they help him develop solutions to problems encountered in adjusting to the regular class environment?

7. Is the pupil's confidence in his ability to function successfully in a regular class and his determination to do so sufficiently great?

8. Is the pupil's ability to learn, as indicated by his test scores, average or above the average of the pupils in the regular class?

9. Is the pupil willing and reasonably eager to be assigned to regular classes for instruction?

10. Is the pupil's chronological age within two years of the average age of the pupils in the regular class?

11. Will the pupils in the regular class accept the deaf or severely hard of hearing pupil as a member of the class and will they give the same consideration they expect to give each other?

12. Is the teacher of the regular class informed regarding the problems faced by a pupil as a result of his lack or severe loss of hearing, and is the teacher willing and prepared to employ instructional practices and procedures that should be most helpful to the pupil?

One criterion worth mentioning here is that the Delaware program emphasizes the ability of the hearing impaired child to communicate with the interpreter-tutors utilizing both receptive and expressive communication skills. This is critical because there are children who cannot benefit from amplification and/or have understandable speech. These children have the right to participate in the mainstream program and in this case, they are the ones who performed well in the mainstream program.

Attitudes toward mainstreaming is also very important here. At first, the hearing impaired children did not want to participate in the program but after several months, they are clamoring for full participation in regular classroom work. The reason is simply this: they accepted their deafness and the hearing peers respected their deafness and bothered to communicate with them utilizing total communication modes of communication.

The hearing impaired child's potentials were discussed with the teachers and the interpreter-tutors. An achievement profile was then developed and maintained for each child. Then the program started.

After a few weeks of the mainstreaming program in operation, it was found that daily progress reports on each child's performance in school is needed. It was developed so as to foster effective reinforcement of the child's school work at home. Parents found the daily reports beneficial for they could assess their children's work in school and discuss their children's progress with the teachers.

Periodic staffings on each child to assess his strengths and weaknesses were held. The supportive services team met occasionally to discuss the children's progress. The supportive services team at Sterck consists of a psychologist, guidance counselor, audiologist, speech therapist, school nurse, and, in some cases, parents.

Reverse mainstreaming was done this year. It means bringing hearing children into the special education program at Sterck School for some specialized help. This concept worked beautifully because the children were well-adjusted to the two environments (hearing and hearing impaired) and, just think, when the hearing children grow up to be doctors, lawyers, bankers, etc., they will come to a greater understanding and appreciation of the deaf people.

Now, the mainstreaming program is a year old in Delaware. Extensive evaluation of the program is being done. Results have not been tallied as yet, but a final report will be drafted for the United States Office of Education delineating the mainstream program for dissemination purposes. Nevertheless, the evaluations that were carried out during its inception are as follows:

1. Formal tests (pre- and post-tests)—
    - *a.* Stanford Achievement test (Gallaudet version)
    - *b.* Iowa Test of Basic Skills
    - *c.* Teacher-made tests
2. Staff Evaluations—
    - *a.* Deafness Attitude Scale on a pre- and post-test basis.
    - *b.* Teachers' evaluations
    - *c.* Interpreter-tutors' reports
    - *d.* Administration's evaluations
    - *e.* Parents' evaluations
    - *f.* Title III monitoring reports by federal and state personnel.
3. Students' evaluations—
    - *a.* Hearing peers' evaluations
    - *b.* Sociometry tests
4. Other evaluations—
    - *a.* Dr. Gilbert Delgado on teachers' and students' views on mainstreaming.
    - *b.* Dr. McCay Vernon on psychological evaluations.
    - *c.* Dr. Alfred White on syntax evaluation instruments.
    - *d.* Ms. Faye Macklin on Cost/Resource Analysis of Program Alternatives for Hearing Impaired Students.
    - *e.* Ms. Judith Athey on communication techniques.
    - *f.* Ms. Dorothy Dreger on mainstreaming components.

In closing, mainstreaming is being encouraged on all levels. The local, state, and federal governments are pushing for it. Much harm can come from it if it is not done properly. In Delaware, the schools involved are developing an exemplary program in mainstreaming and communication training for the hearing impaired. If not Delaware, who will?

NEW YORK SPEAKS TO THE MAINSTREAM ISSUE

Sr. Anne Behre, Ed.D., Superintendent, St. Francis deSales
School for the Deaf, Brooklyn, N.Y.

The concept of mainstreaming handicapped children is not really a new one. For many years now, experienced educators have seen the advantage and advisability of placing into the regular school programs those children who met their criteria for potential successful integration. Those schools, through on-going evaluation and assessment of the individual child made and presently make individual decisions and, when they do, they must take into consideration all the educational possibilities that might best serve each child who is under consideration.

In the great state of New York, this process is on-going and where placement is being decided for any individual child with a hearing impairment, there is a cascade of services available which, if properly understood by administrators and professional personnel, would offer the child a variety of alternatives ranging from full integration, through partial integration and ending at the opposite extreme, full education in a special setting devoted totally to the problems of the hearing impaired young person.

Realizing that these possibilities will only be utilized if thoroughly understood, Dr. Richard Hehir, Chief of the Bureau for Physically Handicapped Children to the State Education Department initiated a three day conference whose sole purpose was to bring together under one roof those administrators from all the variety of settings within the state. This conference was funded by 89–313 money and was jointly sponsored by the State Education and St. Francis de Sales School for the Deaf of which I am the superintendent.

The Conference was called appropriately "A Continuum of Services for the Hearing Impaired" and one of its major goals was to open communication among all those who administered alternative educational services within our state. It was a very historical meeting because for the first time the whole cascade of services within our great state could be seen clearly and those persons connected with the individual types of programs had the opportunity to see and hear first hand what is being offered in a setting different from his own.

About fifty people participated in the Conference representing the State Education Department public schools with itinerant teachers, public schools with hearing resource rooms, the Board of Cooperative Educational Services (called BOCES) special schools, teacher training programs and clinics.

In keeping with the concept of a continuum of services, the participants were all made very aware that within the great state of New York there presently exists the following educational alternatives for the hearing impaired child:

day class programs
resource rooms
itinerant teaching
tutoring services in clinics
special day schools
special day—residential schools

With all these resources operating within the state, it was felt that, after all the exchange of information formally through workshop sessions and informally outside the prescribed discussion groups, planning might be initiated which would insure that the individual needs of the child would and should dictate the type of placement from which he might benefit the most.

As a result of the long hours of interchange wherein each one was learning more about the other's strengths and weaknesses, certain key points emerged. A few of them were:

a. that a qualified educator of the deaf be a required member of any assessment team determining the educational placement of a deaf child within our state.

b. That in each school for the deaf there be a liaison person responsible for continuing determination of the adequacy of the child's placement.

c. That some 89–313 funds be set aside to examine the profile that is common to children what have been successfully or even unsuccessfully integrated.

d. That a committee of professionals attending the conference be organized to give criteria to the state which in turn, might disseminate this material to local committees on the handicapped.

The greatest outcome of this conference really seemed to be that people really talked to each other in an open atmosphere. All were willing to admit that no one had all the answers. As the various participants admitted their own need for help, their lack of knowledge of other types of facilities and other concerns, their communication with each other grew proportionately as all the others admitted their own identification with those same problems.

As one of the participants, I can say on a personal note, that I am deeply grateful to Dr. Hehir who brought this all about. I cannot help but feel that with this broader horizon opened for me, and for the other administrators that the deaf child will have a much better chance for an educational environment dictated by his individual need rather than the vested interest of any of us who were involved in this very historic three day conference.

A publication describing in detail the whole of this conference including the papers given, the discussion points and the recommendations is now in process. It is hoped that it will be ready for dissemination in the fall so that all who are interested may have the opportunity of sharing the information which emerged as a result of those memorable days.

MAINSTREAMING AND CONTINUUM OF EDUCATION SERVICES FOR THE HEARING IMPAIRED

Richard Hehir, Ph. D., Chief, Bureau for Physically Handicapped
Children, State Education Department, New York, N.Y.

The history of special education can be viewed from a beginning of the education of the deaf within special schools. The first school for the deaf was established in this country in 1817 at Hartford, Connecticut. A year later the first private school for the deaf in New York State was established in New York City. These schools, in their origin, were residential and provided a total program of educational services, both academic and vocational, to deaf children through age twenty-one and sometimes beyond that age. It was not until 1869 that the first day school for the deaf was established in this country in Boston. The vast majority of deaf children at the turn of the century were educated in public residential schools. However, within the last fifteen years the percentage of deaf children educated in public residential schools has dropped to below fifty percent. Although the majority of deaf children continue to be educated in public residential schools or in day school and day class programs, the proportion continues to increase in day school and class programs with a corresponding decrease in the residential school programs. (Recommended Organizational Policies in the Education of the Deaf, 1973). There are a number of forces moving in our society today which indicate that handicapped children, including the hearing impaired, will be educated within the "mainstream" of our educational system.

There is general agreement that it is most desirable for children not to be separated from their peers if this is at all possible. Segregation is a word that has been declared an anathema in our American society. Separation because of race, religion or creed is not acceptable.

In more recent years a concern has been expressed for the separation or segregation of the handicapped child from the non-handicapped child. In the past, state laws and education laws supported the exclusion of certain children from regular school when the behavior of the child was disconcerting or disturbing to the teacher and the other children in the school. In fact, some of our special schools for the handicapped originated because parents could not obtain education for their handicapped children and were forced to establish special private schools to meet the needs of their children. The courts, through interpretations of existing laws and with the enactment of new legislation, have now mandated the rights of handicapped children to a free public education. Financial incentives have been provided which enable public school districts to implement the legislation.

The needs of the child should dictate the program—and not the reverse. To achieve this end, all professionals involved in providing alternative educational systems need to communicate effectively from a basis of sound professional knowledge and trust in the integrity of one's associates.

This paper concerns two questions—first: What is mainstreaming and what agencies support this concept? Second: Does the mainstreaming concept include the provision of educational alternatives within a continuum of special educational services organized to meet the handicapped child's instructional needs. It must be realized that deaf children are included in the group called "handicapped" and are affected by any movement affecting this generic category.

THE FIRST QUESTION

For purposes of our discussion today I will define mainstreaming as the well-considered placement of a handicapped child within an alternative educational system where he can achieve academic, social and emotional development through interaction and competition with the non-handicapped child as frequently as possible.

Mainstreaming is a concept—it is not a program. If mainstreaming is to be successful, there must be a recognition that there are a number of variables to be considered. These variables include such things as the facilities available; the staff qualifications; the attitudes of the regular teachers and students; the nature and degree of the handicapping condition of the child; the personality characteristics of the child; the funding provisions available for support services; the support of the school administrator, particularly the building principal; and the support of the parents of the child.

The mainstreaming concept operates on several assumptions. One is that the handicapped child is better educated with the non-handicapped child for both academic and social development. A second assumption is that the handicapped child is more alike than different from the non-handicapped child. It is claimed that in a regular environment the handicapped child is less stigmatized and can develop greater self-image. He will approach normalcy better than in a segregated situation. A third assumption is that through mainstreaming, the abilities of the child are recognized and not the disabilities, since there is no institutionalization of the label in a mainstreamed environment that takes place in a segregated environment. Our task is to determine if these assumptions have more validity in certain circumstances than in others and with some categories of handicapped children and not others.

Who supports mainstreaming?

The integration of handicapped children into regular education has a strong appeal for the parents of the handicapped child who wish to have their child treated as normally as possible. If the child can attend the local school there is no need for separation from family and friends. Couple this with the assurance that the parents frequently receive that the handicapped child will eventually succeed in a regular school program.

The Council for Exceptional Children is the single largest professional organization in special education. At its annual convention in Dallas in 1973, CEC endorsed mainstreaming as part of its policy. This organization stated: "Under suitable conditions education within the mainstream can provide optimal opportunities for many exceptional children. Consequently, the system for the delivery of special education must enable the incorporation of special help and opportunities for them in mainstreaming settings. . . . Children should spend only as much time outside regular classroom settings as is necessary to control learning variables that are critical to the achievement of specific learning goals." Other professional groups and organizations support the concept of "mainstreaming" for handicapped children with equal vigor.

Recent Federal legislation, Public Law 93–380, contains requirements for the states to follow in the utilization of federal funds for services to handicapped children. This legislation mandates that the states must develop "procedures to insure that, to the maximum extent appropriate, handicapped children, including children in public or private institutions or other care facilities, are educated with children who are not handicapped and that special classes, special school or other removal of handicapped children from the regular education environment occurs only when the nature or severity of the handicap is such that education in regular classes with the use of supplementary aids and services cannot be achieved satisfactorily." Any state applying for Federal aid for the handicapped under Part VI B must adhere to this charge for placement of handicapped children in what is defined as the least restrictive environment.

In New York State the Regents (which is the policy-making body for all education in the state) have issued a statement entitled "The Education of Children with Handicapping Conditions," which enumerates several philosophical and policy statements. The Regents state that "the primary and basic responsibility for such a program (education of handicapped children) rests with the local school district, that it must be an integral part of public education." They state further that "the quality of many publicly operated or supported educational programs is related to the degree to which children with handicapping conditions are grouped or otherwise combined effectively with other children in the mainstream of our society." This paper is the blueprint for the future regarding educational policy for the State of New York in relation to the handicapped.

The courts, in recent years, have increasingly emphasized the rights of a handicapped child to a free public education. The PARC and Mills decisions particularly affirm this right and also insist that lack of funds is not acceptable for the local school not to provide a program. The appropriateness of the special program provided to the handicapped child is also a court concern as is the right to appeal regarding placement of a child in a particular setting.

Such court decisions are having an effect upon state legislatures which are enacting laws which speak to placement in regular class as preferable to special class. Some state legislation speaks to a priority for placement of the handicapped child with regular class first and special school and institution last.

During the 1974 legislative session, the New York State aid formula was revised so that recognition was given to the increased costs associated with the education of handicapped children. Chapter 241 provided double weighting aid to local districts providing special class, resource room, itinerant teacher or other special assistance to handicapped children. The large city school districts also received special services aid for those programs in special schools for the most severely handicapped. This financial aid from the state could be claimed by public schools for the special school programs for the deaf. It is expected that the 1975 legislature will continue this move to support the costs of educating handicapped children receiving services in the local public school district. There is some movement in the legislature to support on an "excess cost basis" the educational services to handicapped children in the local district. It is felt that an excess cost formula would enable the district to provide a program adequate to the child without regard for the cost involved.

Other states, like Massachusetts, have already enacted legislation (Chapter 766 of the Acts of 1972), which went into effect on September 1, 1974. This legislation provides for the student who is unable to learn within a regular classroom setting, to be referred to a team of professionals within each school district who will try to discover the cause of his or her difficulty and decide if the student has special learning needs. These professionals will perform a thorough evaluation and, based upon their findings, will develop an educational plan for the child. The educational plan will recommend that the student participate in the least restrictive of one or more educational alternatives of program prototypes. All students are to be assigned to a program that comes closest to resembling a regular classroom. Attendance at a special school, like a residential school for the deaf, is on a contract basis between the public school of residence and the school for the deaf.

Thus we see that parents, the professional educational organizations, the courts, the federal and state governments through their policy and funding arrangements, are supporting the mainstreaming or integration of all handicapped children in the schools. Mainstreaming, however, is not a single option. It should involve a range of instructional alternatives.

A SECOND QUESTION

Does mainstreaming mean placement of handicapped children in regular classes only? It must be recognized that indiscriminate mainstreaming can harm rather than help certain handicapped children and this is particularly true of the severely handicapped, including the deaf. The initial glow of satisfaction when integration is made will be replaced with frustration and failure later if the mainstreaming program is not well planned and adequate support services provided for the handicapped children who should be carefully selected for placement.

But does mainstreaming involve the selection of options or alternatives?

The professional organizations in special education, like the Council for Exceptional Children, are supporting the concept of mainstreaming and yet there is a recognitioin of the need for providing educational alternatives for handicapped children. The litigation movement, notably in the PARC and Mills decisions, indicates that a free public education is a right of handicapped children and that these children should be treated in as normal an environment as possible. However, even the courts recognize that there will always be some persons needing special school or institutional programs. Institutionalized persons have the right to receive a full treatment program, including education (Wyatt vs. Stickney, 1971).

The Regents of New York State, although they support the concept of mainstreaming, nevertheless recognize the existence and contribution which special schools for the handicapped have made and will continue to make. The Regents paper refers to the desirability of handicapped children receiving appropriate services within the local district but acknowledges that adequate service should be contracted by local districts with Cooperative Boards, private agencies or provided locally in larger school districts. New York State Education Law provides that the services to deaf and blind children may be in special state-supported private schools also. There is recognition, therefore, that alternative educational placements must be made available.

A system of educational alternatives

Evelyn Deno developed one approach to educational alternatives. The Cascade of Special Education Services (Deno, 1971) recognizes that handicapped children function at various ability levels and need placement within a system of special services. One handicapped child may be placed in a regular class and be able to function there without supportive services. We would say that this child is not educationally handicapped. Handicapped children on a different level may function in a regular class but need supplemental instructional services in the form of a resource room or from an itinerant teacher. Another level might include part-time service in a special class and part-time participation in a regular class. Hopefully, participation would be in academic subject areas. Another level would place the handicapped child in a special class fulltime but in a regular public school building. Another level might call for the handicapped child to be placed in a special school which might be a day or residential facility. Another level would include the handicapped child being placed in a homebound or hospital situation where instruction is provided by an itinerant teacher—possibly in conjunction with home-to-school telephone or interactive television. Another level might be instruction in an institution where education is part of the therapeutic or custodial services provided. Assignment of a particular handicapped child to an instructional level should be dependent upon the needs of the child and his abilities to function within that level. Much of the legislative movement and the fiscal support systems which are presently being developed, are attempts to remove the economic constraints which frequently dictate that only one educational service is provided to the child.

Mainstreaming within the educational alternatives

Let me state that in such a cascade system of special educational services, mainstreaming should take place at any level. Children in regular class, of course, are mainstreamed. Handicapped children in a special class can be mainstreamed through participation in regular educational subject areas in which they can compete successfully. Even handicapped children in special class who cannot compete academically can be mainstreamed in non-academic areas and perhaps in vocational areas. Handicapped children such as the deaf, attending special schools, should have the opportunity to attend regular public schools for some academic subject areas in which they can succeed. Even those in need of institutional care can be mainstreamed through field trips and perhaps limited community participation in activities of a social or recreational nature.

What is needed within the cascade is a strong interaction among the agencies delivering special services to the handicapped children needing each kind of service. This demands interaction between special educators under different administrative structures as well as an interaction between regular administrators and special educators both at the teaching level and at the administrative level. The implication is that administrative organization and training of administrators (particularly building principals) as well as teachers, may need to undergo profound changes. (Deno, 1973).

In discussing educational alternatives we must be concerned with the effectiveness of the teacher. We are concerned with the development of competence-based teacher education for the training of future teachers of the deaf in New York State (Hehir, 1975). We feel that our future teachers of the deaf must be trained to function adequately and successfully in a number of alternative educational environments represented by the cascade of special education service. The academic and specialized training of future teachers of the deaf must be supplemented by the adaptability and other personality characteristics needed by teachers, to function in the developing educational alternatives which must be available to mainstreamed hearing impaired children. Adequately trained teachers of the deaf are certainly one essential component in the provision of educational alternatives for deaf children.

Alternative educational services within a continuum

I would advocate that mainstreaming as a concept should include the availability of a continuum of special educational alternatives. Just as some handicapped children should be educated in regular classes, other severely handicapped children can succeed only if provided with special class or special school placement. Each handicapped child should have available to him the type of special service model which most adequately meets his needs and abilities. A number of organizational structures as well as staff arrangements must be provided in order to meet the varying instructional needs of handicapped children. Deaf children have instructional needs different from mentally retarded children and the service program provided should match these instructional needs.

The instructional activities which occur within the service program must promote the academic and social development of the deaf child. The deaf child should be able to move from the special school to the special class in a public school, or the reverse, with no indication that a move in either direction is a mark of failure. Most important, however, is that the deaf child have the opportunity to move to alternative programs, based upon his needs and abilities. There should not be just isolated programs available but rather a planned educational delivery system. The deaf child should be able to enter a program and move if necessary, within a well structured continuum of services.

Obstacles to the continuum

If we agree about the validity of providing alternatives based upon children's needs, we must be cognizant of the other very real and impelling factors that militate against providing educational alternatives. One administrative concern of very high relevence deals with financial support systems.

In New York State we have differing funding arrangements. Chapter 241 provides state aid on a double weighting basis to local school districts as well as large city school districts. Large city school districts also receive special services aid for severely handicapped students in special school programs. Boards of Cooperative Educational Services provide services within a region of the state, to handicapped children from a number of component districts. The state aid funding for BOCES' services is at least 50 percent and can range as high as 90 percent of cost. Education law provides full operating costs for deaf and blind children appointed to special schools listed in Article 85 of the Education Law. The funding formulas which I just indicated are not uniform. The movement in legislation, however, is to bring these formulas more into line so that economic considerations are lessened when educational placements are considered. If an "excess cost" formula is adopted by the state legislature, with or without federal aid, the goal of achieving adequate placement for handicapped children without economic considerations will come closer to realization.

Concerns, other than financial, include distinctions in the handicapping population, the administrative structures which exist, and the decreasing population.

We must recognize that the "hearing impaired" are included as part of the handicapped population, and that the same standards for probability of success are frequently applied to the hearing impaired as to the handicapped generally—such as the educable mentally retarded. However, the needs and requirements in communication and education for the hearing impaired with differing levels of hearing must be made. The Council on Education of the Deaf subcommittee To Define Deaf and Hard of Hearing is attempting to deal with this issue. We must make these distinctions because of the nature and severity of the handicapping condition which they possess. Children who have the more severe impairement usually require a more structured educational alternative. Children with moderate or mild impairment usually can succeed in integrated settings where mainstreaming occurs and essential support services are provided. Children with multiple handicaps may need the most structured of educational alternatives in order to achieve the maximum of their potential.

A second concern is the separation and misunderstandings which follow when the educational alternatives operate under different administrative structures. Usually the mainstreamed programs are administered by local public school districts. The more structured educational alternatives are frequently administered by regional education agencies or private agencies, special schools, and State Departments. The problem is centered upon the proper role and function of each educational alternative service agency. First, there must be a recognition by each agency that handicapped children should have available the services represented in the cascade model, according to their needs. Secondly, the handicapped child should be able to move from one level within the cascade model to another level because of his needs and not as a mark of success or failure within the system. If the child is to be successful there must be greater understanding of the roles and functions of the agencies within the system and agreement to work together for the benefit of the child. There must also be a willingness to share information and expertise among the professionals. Each educational agency in the system should complement and supplement each other since there is a need for all educational alternatives for the handicapped, including the deaf child. A beginning step might be the establishment of mutually benefiting cooperative arrangements between the school for the deaf and the public school. Such cooperative arrangements exist in some regions of our state, and I am sure—the country, to a greater degree than in other regions.

A third concern is the decrease in the number of children being born. The number of handicapped children available will decrease proportionately. The massive epidemics such as the rubella epidemic of 1963–64 have not reoccurred. Elementary schools for the deaf in New York presently serving the rubella population will begin to see these children transfer to secondary programs. These secondary programs will have to be modified to meet the needs of the deaf rubella population being admitted. In the 1980's the rubella population will begin to graduate from the special schools. Thus, we are faced with a limited intake population in the special schools—and decreasing enrollment as the rubella population passes through and out of the programs. The deaf children who are being admitted to the special school programs are essentially pre-lingually deaf, with severe to profound hearing losses and frequently have multiple handicaps.

As the numbers decrease there is a natural inclination to compete for the children who are available for the alternative educational placements. Early identification and treatment with education should result in some handicapped children entering the regular public schools without need for intensive and long-term special education services which may have been needed in the past. These are very real problems which militate against free communication and professionalism in evaluating the true needs of handicapped children—and yet this is precisely what must be done.

One professional attitude

I read with interest the report of the Board of the Alexander Graham Bell Association which dealt with the Association's reexamination of its purpose and mission (Volta Review, March 1975). This report was the consensus of the Board of Directors that hearing impaired children have the potential for developing speech communication proficiency through an auditory/oral approach but at the same time the Board recognizes that the auditory/oral program may at times be contraindicated and that "total communication" including its auditory/oral components may be a viable option for some deaf children. The Board agreed that it would aid any school or program for hearing impaired children and the school's efforts to develop or improve programs in speech communication through a variety of support systems. I believe that this statement of the Board reflects the kind of realistic position which a professional association should take so that polarization will not occur. This is precisely the concern which the Board is having over a communication issue.

In a recent article one educator of the deaf wrote a satirical article dealing with the serious problems of mainstreaming deaf children (Bellefleur, AAD 1974). This article cautioned against programming for deaf children on an emotional basis rather than an educational one. The author defined the residential school's total program of services as superior to what could possibly be offered to the deaf children in a public or day school program. He also suggested developing a long range program for all hearing impaired youngsters. Certainly we could agree that a long range plan for all hearing impaired children is what should be developed. What this demands, however, is free and honest communication among professionals, both within special education and between general and special educators, in which it is clearly understood that no one has the complete answer to the problem. Such a discussion must also recognize that change is occuring and that the residential school, just as the public school, must adjust to meet the parental, professional, legal, financial and other pressures advocating change. Our task is to insure that the deaf child receives an adequate program according to his needs.

Conclusion

Mainstreaming, then, is a concept that is popular and is being advocated for all handicapped children, including the deaf. Most handicapped children can benefit from integration with the non-handicapped. This integration, however, must be carefully planned and adequate support services must be provided if the handicapped child is to succeed. A range of special educational alternatives must be available for handicapped children and they should be placed within a program based upon their needs. Freedom to move from one alternative to another should also be based upon child needs and not as a mark of failure or rejection.

The deaf child has a most severe handicapping condition. He needs a very structured program provided by fully qualified staff. Special support services, such as speech, language and auditory training, must be provided in addition to regular academic education. Generally a special school for the deaf program will meet the needs of the deaf child. Some deaf children can, however, succeed in regular public school class, particularly after good training in a special school for the deaf. Other deaf children may not "make it" in a regular class even with good support services, and need to transfer to a special school for the deaf. A continuum of special educational services should exist which will allow the deaf child to obtain the services and program he needs. Cooperation between the public school and the residential school is needed along with a recognition of the role and contribution of each in the continuum of educational services.

BIBLIOGRAPHY

Bellefleur, P. A. "An Open Letter to My Collegues." American Annals of the Deaf, (February 1974), 29–33.

Deno, E. N. "Strategies for the Improvement of Educational Opportunities for Handicapped Children: Suggestions for Exploitation of EPDA Potential." *Exceptional Children in Regular Classrooms.* Edited by M. C. Reynolds and M. D. Davis. Minneapolis: University of Minnesota, 1971.

Deno, E. N. (Ed.) *Instructional Alternatives for Exceptional Children.* Arlington, Va.: Council for Exceptional Children, 1973.

Hehir, R. G. "Integrating Deaf Students for Career Education." *Exceptional Children,* (1973), 39, 611–618.

Hehir, R. G. "Competence Based Teacher Education for Teachers of the Deaf: The Issues from the State Level." *Volta Review,* (February 1975), 105–116.

Katz, L., Mathis, S. L. III, & Merrill, E. C. Jr. *The Deaf Child in the Public Schools.* Danville, Ill.: The Interstate Printers & Publishers, Inc., 1974.

Mainstreaming: Idea & Actuality. An occasional paper from Commissioner Ewald B. Nyquist. The State Education Department, Albany, New York, 1975.

Northcott, W. H. (Ed.) *The Hearing Impaired Child in a Regular Classroom: Preschool, Elementary and Secondary Years.* Washington, D.C.: The Alexander Graham Bell Association for the Deaf, Inc. 1973.

Recommended Organizational Policies in the Education of the Deaf. Prepared by an ad hoc committee of the Conference of Executives of American Schools for the Deaf, Inc. Washington, D.C.: The National Office. December 1973.

Schein, J. D. and Delk, M. T., Jr. *The Deaf Population of the United States.* Silver Spring, Md.: National Association of the Deaf, 1974.

The Education of Children with Handicapping Conditions. A statement of policy and proposed action by the Regents of the University of the State of New York. The State Education Department, Albany, New York, November 1973.

THE INFLUENCE OF EARLY LANGUAGE AND COMMUNICATION ENVIRONMENTS ON THE DEVELOPMENT OF LANGUAGE COMPREHENSION IN DEAF CHILDREN

Kenneth Brasel, Ph. D., American School for the Deaf
West Hartford, Conn.

Several studies comparing deaf children of deaf parents exposed to manual communication with deaf children of hearing parents having exposure to only oral-aural methods of communication have indicated that exposure to manual communication has resulted in superior performance in such areas as academic achievement, social adjustment, and speechreading. The previous studies, although statistically significant, failed to show marked grade level differences, and must also be questioned on the basis of the lack of control over certain relevant variables such as parental acceptance and language competence, socioeconomic status, and the onset, amount, intensity, and quality of educational intervention. The purpose of this study was to investigate the interaction of communication method and language model on the syntactic competence of deaf children controlling some of those variables.

Four groups of deaf *Ss* between the ages of 10-0 and 18-11 years were tested, employing the Test of Syntactic Ability, the language and reading sub-tests of the Stanford Achievement Test, and analysis of written language samples. For each of the four groups, three males and three females in each of the three age categories (CA 10-0—12-11; 13-0—5-11; and 16-0—18-11) were tested.

The two groups of *Ss* with deaf parents are identified as "Manual English" (ME) and "Average Manual" (AM). The ME group was composed of *Ss* whose parents were language-competent deaf persons who used manual communication with the *Ss* from the time their deafness was discovered. The AM group was composed of *Ss* whose parents' written language contained significant deviancies from Standard English and, therefore, could not have exposed their child to correct syntactic models.

The two groups of *Ss* with hearing parents are identified as "Intensive Oral" (IO) and "Average Oral" (AO). The IO group was composed of *Ss* whose parents expended every effort as early as possible to provide the finest and most intensive "Oral" training possible. The AO group was composed of *Ss* whose parents followed the advice of "talk, talk, talk to your deaf child" until he/she is old enough to enroll in the nearest program for the hearing impaired.

The results showed significant superiority of the ME group over the two Oral groups on five of the six major syntactic structures tested in the TSA. The ME group was found to be statistically superior to the AM group on the Relativization sub-test of the TSA (although outscoring the AM group on all other five major structures). No significant differences were found between the AM and IO or the IO and AO groups on any of the TSA, although the AM group outscored the two oral groups and the IO group generally did better than the AO group.

NOTE.—This is a report on a dissertation conducted under the direction of Dr. Stephen P. Quigley, IREC, University of Illinois.

Results of the analysis of the SAT showed statistically significant superiority of the ME group over the other three groups, scoring from one to nearly four grade levels higher than the next highest scoring group, the AM group. The only other statistically significant difference found was in Word Meaning with the AM group superior to the AO group.

The results of the analysis of written language samples were more variable. Generally speaking, the ME group out-performed the other three groups, but the only significant differences found the AO group inferior to the other groups on Grammatical Correctness Ratio and Number of Errors; and to the ME group on the Type Token Ratio.

In summary, the results show that the data supported the underlying theory that parental language model and method of communication interact to influence language development in deaf children.

Conclusions

One major conclusion to be drawn from the present study is that language input made possible by early employment of M/C permits parental language competence to influence the child's developing language ability. Since the high visibility of M/C provides the child with both a receptive and expressive means of communication, he is enabled to test his developing language ability by using it with his parents, siblings, and other M/C-using persons in his environment, and to modify it according to the feedback he receives. If the manual language input is in grammatically correct ME, he has a greater opportunity to generate grammatical rules consistent with Standard English than if the language input is in ASL, where the child's tendency to develop grammatical rules different from those of Standard English is heightened. By the same token, when communication is limited and labored, such as in the case of only oral input where the child's speech and speechreading skills are slow to develop, then language input is limited to the isolated words he is able to learn to recognize on the lips, and language output is restricted to the isolated words the child has learned to pronounce intelligibly. Generation of syntactic rules of grammar, therefore, would be dependent upon the quantitative and qualitative rate at which the child's speech and speechreading skills develop. At any rate, few children develop speechreading skills rapidly enough to be able to follow the rapid verbal communication taking place among the adults and any hearing siblings in the child's environment; thus, the child is deprived of important language input during the first few years of his life.

A second conclusion to be drawn from the study is that the superiority of the deaf-parent groups over the hearing-parent groups shown in previous studies (cited earlier) was possibly attributable to the inclusion of some ME-type *S*s in the deaf-parent groups and the inclusion of some AO-type *S*s in the hearing-parent groups. The present study found that, while the two combined Manual groups were significantly superior on every test measure employed, when the ME and AO group scores were deleted, no significant difference was found between the AM and the IO group (although the AM group consistently outscored the IO group). Having deaf parents, therefore, does not automatically guarantee the deaf child an academic or syntactic advantage over one who has hearing parents insofar as the measures used were able to discriminate. The greatest advantage appears to come when the parents are competent in Standard English and use Manual English with and around the child, as witness the marked superiority of the ME group over both Oral groups or nearly every test measure employed and that some advantage is found where early Manual communication exists regardless of degree of deviation from Standard English syntax.

Implications and discussion

The implications extend far beyond the possibility that the Intensive Oral group may be at the upper limits of the optimum one can expect in an Oral Only approach and that the Manual English group may be at the minimal level of achievement. As exemplified in figures 2 and 3, the two Oral groups showed parallel and steady gains across the three age groups on all six major TSA test structures. On five of the six structures tested, the two Manual groups showed a flattening of the growth curves after age 13.0, and differed from each other in that the AM group showed significantly large gains in percentage from the youngest age group to the middle age group, but a leveling off from the middle to oldest age group. The ME group showed virtually no gains across the age dimension on three of the structures (Conjunction, Verb Usage, and Pronominalization); a slight but steady gain on Question Formation; and, an increase from the youngest to middle age groups but a decrease from the middle to oldest age groups of Negation and Relativization.

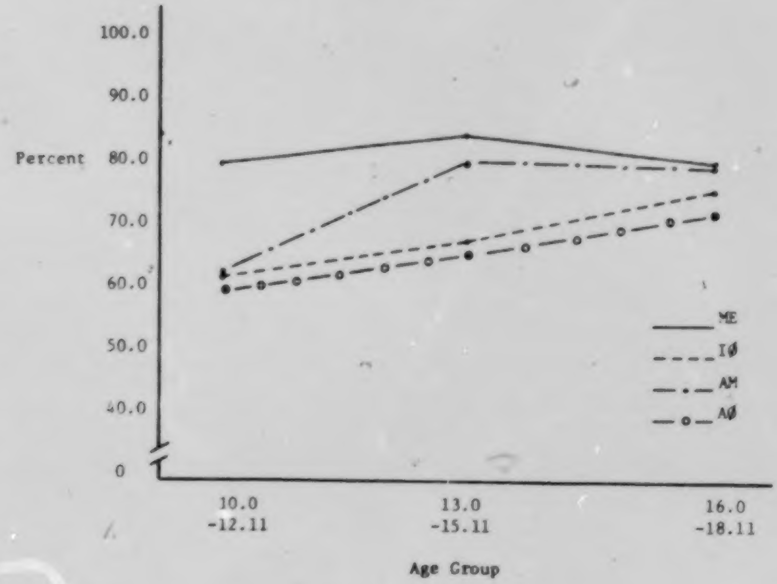


FIGURE 1.—Percent scores on verb usage, by group and by age group.

This "plateau effect" may be attributable to a possible (1) ceiling out (33 percent of the ME *S*s obtained perfect scores; 20 percent of the AM, 16 percent of the IO, and only 8 percent of the AO achieved 100 percent), (2) an artifact of the TSA scoring procedures (penalized for interpreting the errors into a higher syntactic level than anticipated when the intended responses were developed for the scoring key), (3) a reflection of the plateau noted in other studies (Gentile, 1969; Babbini and Quigley, 1970), (4) a number of 16 to 18 year old ME *S*s were enrolled in Gallaudet College, (5) the "Senior Slump" often noted in schools for the deaf, and/or finally (6) a failure on the part of the educational system to properly program for students who are equipped with a language base.

This later alternative hypothesis bears further exploration. If in fact this is the case, then schools are negligent in their responsibilities, are not attending to individual differences, and are not fully capitalizing on the early language advantage some deaf youngsters possess when formal schooling is initiated.

The implications of the present study are that parents of deaf children can and should learn ME as soon as their children are discovered to be deaf, and should train themselves to use it among themselves as well as with the child any time the child is around. This is not by any means a startling, new revelation. Bonet (Bender, 1960) advocated in 1620 that "everyone living in a house with a deaf-mute should be forced to learn the manual alphabet."

Hearing parents only need a manual symbol system to bridge the gap between themselves, English and their visually dependant deaf child. Hearing parents already possess English, therefore, provided signs and fingerspelling to accompany their speech, are capable of equalling or bettering that which deaf parents can provide.

It is therefore recommended that parent-infant preschool training programs incorporate instruction in both ASL (Ameslan) and ME in their training programs. ASL is included, for the child's initial attempts to express himself will most likely be more or less in ASL, and the parent will have to be able to understand the child's communication before he can begin modifying it. At the same time, the parents should use ME among themselves, for the exposure to grammatically correct language as used by adults is important language input that should not be omitted from the child's early environment.

Further research is recommended to clarify the role of ASL or Ameslan with respect to those children whose early language exposure and input has been ASL or Ameslan. It must be remembered that deaf children are not "native" ASL-users, and the language development and acquisition reflects the form of communication they were exposed to during the early childhood years. It appears that initial ASL communications require special intervention in order to gradually modify the syntax to more closely approximate Standard English. Special language curricula designed specifically to capitalize on this basic language foundation may facilitate transfer to correct English syntax. Some of the techniques employed in teaching English as a second language could be of use in developing a curriculum for deaf children of ASL-using deaf parents.

Finally, it is recommended that specific curricula and/or intervention strategies be developed and employed with ME-type deaf students which will maximize their potential for development of normal language.

Language (English Syntax) cannot be taught, it must be given an opportunity for natural development. A child must be provided with clear and complete language input, a free and easy mode of expression, and a conducive atmosphere and accurate model of the language for refinement. Without these very general, but basic conditions during those formative years from 0 to 5 or 6 a child cannot hypothesis test and self-generate correct syntactic rules of the English Language. Our traditional approaches which rely basically on the rote memory approach must be discarded and replaced by intervention techniques that develop from a foundation that results when a deaf child is nutured in a completely visual language environment that affords total involvement in the communication process.

Formal instruction must incorporate the philosophy of encouraging self-expression as well as current linguistically sound language and cognitive development techniques. Serious investigation is needed in determining the usefulness of specific visual-perceptual training of pre-school deaf youngsters, incorporation of a bilingual approach (Manual English and Ameslan), Teaching English as a Second Language approach, careful examination of the effectiveness of the various new signed English systems, and reverse integration (integrating Manual English using hearing children into early childhood programs for the deaf.)

One final need is careful examination of the visual processing modality. The qualitative and quantitative aspect of visual processing must be studied in relationship to the nature and amount of manual communication that can be decoded, stored, and retrieved (both short term and long term) as well as the question of cortex capacity when amplification is added.

Research in learning disabilities has shown that receiving information via both the auditory and visual modalities can cause an overloading of the cortex and prevent processing of information from taking place.

In summary, more questions are raised than resolved by the results of this study and although we may know more about the influences of specific types of early language and communication environments on the syntactic development of deaf individuals, there are greater responsibilities to be assumed by administrators, educators, and researchers if we are to more adequately meet the educational objectives and potential of deaf youngsters.

REFERENCES

Babbini, B. E., & Quigley, S. P. A study of the growth patterns in language, communication, and educational achievement in six residential schools for deaf students. Institute for Research on Exceptional Children, University of Illinois, Urbana, 1970.

Bender, R. E. The Conquest of Deafness. Cleveland, Ohio: Western Reserve University Press, 1960.

Gentile, A. *Academic achievement test performance of hearing-impaired students.* Office of Demographic Studies Series D, No. 1, Gallaudet College, Washington, D.C., 1969.

CREED III INSERVICE TEACHER TRAINING IN DEMONSTRATION WORKSHOP: PIAGET ACTIVITIES FOR THINKING TEACHERS AND THINKING CHILDREN

Sydney Wolff, Ph. D., Assistant Professor, State University of New York, Geneseo, N.Y.

The Inservice Teacher Training in Cognition project is a three year program (1972–1975) sponsored by Cooperative Research Endeavors in Education of the Deaf (CREED), an organization of New York State Schools for the Deaf, and federally funded under Title I, PL 89–313.

Learning and evaluation in schools is based on language competence as necessary for mental development. Such a view permits failure, frustration, and learning disability for large numbers of students. Unless the decision makers in the lives of deaf children can directly experience alternate modes of communication and cognition, and can directly see deaf children perform at high thinking levels, their expectations for those children will remain low, narrow, and of the caretaker variety.

The Inservice Teacher Training in Cognition project focuses on thinking, problem solving, verbal and non-verbal communication and on learning alternate modes of teaching and learning. We use concrete materials and interpersonal situations that promote concept formation developmentally. We focus on process rather than on product, and primarily stress spontaneity, independence, curiosity and confidence in children and teachers attacking problems posed in unexpected terms. The activities presented deal with characteristic mental operations such as sorting, classification, ordering, perspective, probability, strategy thinking, movement and role play and creativity. These represent basic mental operations that demonstrate the broad range of abilities characteristic of all children. Using them allows the teacher a positive and broad view of coping and adaptive behavior and development.

The primary Cognition program objective is the inservice training of teachers in schools for the deaf, which should enable them to understand and utilize in their classrooms:

1. the developmental nature of learning;
2. the major areas of conceptualization, their interdependence, and their relationship to traditional subject matter;
3. methods and materials which provide open ended cognitive experience, accessible to groups of children;
4. the new role of teacher as mediator.

The basic format for the Cognition program was developed by the four original staff members during the spring and summer of 1972, based on Sydney and Caryl Wolff's prior cognitive learning program, "A Thinking Laboratory for Deaf Children" at the West Virginia School for the Deaf (under grant OEG–0–9–182044–0784 [032], Bureau of Education for the Handicapped, United States Office of Education, Department of Health, Education and Welfare and directed by Hans Furth) and summer Piaget Workshops at the State University of New York at Geneseo. A description of the basic activities was written and published in 1974, "Games Without Words, Activities for Thinking Teachers and Thinking Children" (Sydney and Caryl Wolff) and published by Charles C. Thomas, Springfield, Illinois. The book also contains a list of materials and references.

The first year, the project's two teacher trainers worked with teachers in the three upstate New York schools: Saint Mary's School for the Deaf in Buffalo, the Rochester School for the Deaf and the New York State School for the Deaf at Rome. (See "Report of the Proceedings of the Forty-Sixth Meeting of the Convention of American Instructors of the Deaf," 1973, p. 628–630.)

The staff also instituted the use of video tapes as a project evaluation device in each of the schools. Pre and post tapes were made by the media center personnel in each school and these tapes were later used in testing a new Cognitive Verbal-Nonverbal Observation System for Use in Classrooms for the Deaf. This schedule, continually revised during the first two and a half years of the project, was found to be useful in evaluating both traditional and cognitive lessons and has since been compared with the application of the Flanders Schedule, assessing the validity of a verbal-nonverbal schedule for use in schools for the deaf.

In 1973–74, one and a half new staff members were added to the project, which allowed inclusion into the program of four downstate New York schools: Saint Joseph's School for the Deaf, Saint Francis de Sales School for the Deaf, Mill Neck Manor and the Cleary School for Deaf Children, as well as a new dimension to the upstate training program, that of movement and role play. In 1974–75, the staff again increased by one and a half, with movement and role play on a full time basis, serving both upstate and downstate, and the addition of another staff member increasing the downstate coverage to include Caritas School for the Deaf, The New York School for the Deaf at White Plains and School for the Deaf JHS 47 in New York City. Other than the movement and role play aspect, the teacher training was essentially completed in the three upstate schools, and the staff then decided to try one more aspect of program expansion, that of attempting self sufficiency and maintaining interest through the establishment of teacher centers. It is hoped that the teacher centers will provide the basis for an ongoing local program in each of the schools.

During the three years of the project in New York State, the staff has worked with approximately three hundred teachers and two thousand children, preschool through high school, as well as presenting numerous workshops at schools, state and national conventions.

At this time, the closing of the project, the seven member staff is focusing largely on the identification and exploration of problem areas involved in this type of activity. Questions have continually arisen that have not been answered, and indeed some may remain so. For example, the staff sees that teacher interest in this project has been and remains high. Is this general teacher response directed, however, to the materials and activities as content in themselves, or is it directed to the method and philosophy which the activities are intended to exemplify? The experience is designed to give teachers insights into their own processes, and to give them fresh insights into the assumptions underlying the concepts of motivation, learning, the role of the teacher, the nature of experience and the adaptability and development of the individual.

CURRENT CURRICULUM OPTIONS AS APPLIED TO THE EDUCATION OF THE DEAF

Lee Murphy, Ed. D., Assistant Professor, University of Tennessee,
Knoxville, Tenn.

Any instructional system is relegated to ineffectuality without a strong theory of educational procedures. Each new generation of educators must explore and define the direction and goals of education. Jerome Bruner maintains that educational reform must begin with the understanding of how a child acquires information and changes knowledge into action. Knowledge has to be set within the context of action. Each generation gives new form to the aspirations that shape education in its own time.

Bruner assumes that problems beset any educational enterprise. He proposes a twofold problem.

> How can the basic subjects be rewritten, and how can teaching materials be revamped in such a way that the prevading and powerful ideas and attitudes relating to them are given a central role? Second, how can the levels of these materials be matched to the capacities of students of different abilities? Mastery of the fundamental ideas of a field involves not only the grasping of general principles, but also the development of an attitude toward learning and inquiry, toward guessing and hunches, toward the possibility of solving problems on one's own. A student must organize his learning in such a way as to make what he learns usable and meaningful in his thinking.[1]

Teaching specific topics or skills without making clear their context in the broader structure of a field of knowledge is an undesirable approach to education. Bruner suggests that the teacher tempt the growing child with problems which will lead him into the next stages of development. He identifies three stages in the act of learning: 1. acquisition of new knowledge, 2. transformation or the use of the information to go beyond it, 3. evaluation or the checking whether the way the information is manipulated is adequate to the task.[2]

Students should know what it feels like to be completely absorbed in a problem. A careful examination of the nature of intuitive thinking might be helpful to those charged with curriculum construction. Bruner charges that the formalism of school learning has somehow devalued intuition. Intuition implies the act of grasping the meaning, significance, or structure of a problem without explicit reliance on the analytic apparatus of one's craft.

> It requires a sensitive teacher to distinguish an intuitive mistake—an interestingly wrong leap—from a stupid or ignorant mistake and it requires a teacher who can give approval and correction simultaneously to the intuitive student. Along with any program for developing methods of cultivating and measuring the occurence of intuitive thinking, there must be some practical consolidation of the classroom problems and the limitations on our capacity for encouraging such skills in students.[3]

---

[1] Jerome Brunner, *The Process of Education* (Cambridge: Harvard University Press, 1965), p. 20.

[2] *Ibid.*, p. 68.

[3] *Ibid.*, p. 48.

Bruner does not advocate a frenzied activity in the classroom. He is seeking to destroy the growing infection of the spectator's passivity which is at work in our present contemporary society. Children have to become more involved in the process of learning.

The teacher is not only a communicator but a model. "A teacher who will not or cannot give play to his own intuitiveness is not likely to be effective in encouraging intuition in his students. To communicate knowledge and to provide a model of competence, the teacher must be free to teach and to learn." [4]

Bruner observes that by the time school age children enter a learning task, they have come to expect quite arbitrary and, from their point of view, meaningless demands to be made upon them by adults—the result of the fact that adults often fail to recognize the task of conversion necessary to give their questions some intrinsic significance for the child.

> Children, of course, will try to solve problems if they recognize them as such. But they are not often predisposed to or skillful in problem finding, but they can be led to these activities by encouragement and instruction. Children, like adults, need reassurance that it is all right to entertain and express highly subjective ideas, to treat a task as a problem where you invent an answer rather than finding one out there in the book or on the blackboard. It is necessary to reestablish in the child's mind his right not only to have his own private ideas but to express them in the public setting of a classroom.[5]

Bruner defines instruction as the leading of a learner through a sequence of statements and restatements of a problem or body of knowledge that increases the learner's ability to grasp, transform, and transfer what he is learning. Instruction is a provisional state that has as its object to make the learner or problem solver self-sufficient.[6] There is nothing more important in teaching than to provide the learner the earliest opportunity to learn the way of thinking appropriate to a given subject matter. Open up questions like—"What might be and why isn't it?"

Bruner proposed that there be these basic changes in pedagogical practice. He is convinced that the way in which our ordinary educational activities are carried out will not equip men with effective convictions. Relevance, for Bruner, depends upon what you know that permits you to move toward goals you care about. The changes he advocates are along the following lines:

1. Let knowledge as it appears in our schooling be put into the context of action and commitment. Let the skills of problem solving be given a chance to develop on problems that have an inherent passion—whether racism, crimes in the street, pollution, war and aggression, or marriage and the family.

2. Education must concentrate more on the unknown and the speculative, using the known and established as a basis for extrapolation. This shift will shake the traditional role of the teacher as the one who knows, contrasting with the student who does not.

3. Share the process of education with the learner. There are few things so exciting as sensing where one is trying to go, what one is

---

[4] *Ibid.*, p. 90.

[5] Jerome Bruner, "The Relevance of Education," (New York: Norton and Co., Inc. 1971), p. 62.

[6] Jerome Bruner, "Toward a Theory of Instruction," (Cambridge: Harvard University Press, 1965), p. 53.

trying to get hold of, and then making progress toward it. The reward of mastering something is the mastery, not the assurance that some day you will make more money or have more prestige.

4. Divide the curriculum into a Monday-Wednesday-Friday section that continues during the transition to work with what has been best in our school curricula up to this point, and a Tuesday-Thursday curriculum that is as experimental as we care to make it—seminars, political analyses, the development of position papers on school problems, problem finding in the local community. We are lacking diversity in experiment and can afford controversy in order to get it.[7]

Bruner realizes that his proposals involve a vast change in our thinking about schools, about growth, about the assumption of responsibility in the technological world. He wants to highlight the role of intention and goal directedness in learning and the acquisition of knowledge, and the conversion of skill into the management of one's own enterprises. The objective is to produce in our citizens, skill in the achieving of goals of personal significance, and of assuring a society in which personal significance can still be possible.

Bruner's theory of instruction can be implemented quite easily in an "open classroom" approach to education. Herbert Kohl in "The Open Classroom" aptly introduces the teacher who is seeking alternatives to textbooks and to the domination of the teacher, to the higher obligations of teaching from curiosity. He explores a learning cycle which moves from curiosity to discovery to generalizations to renewed curiosity. Bruner's approach centers on the integral structure of the subject matter, its connectedness, the derivations that make one idea follow from another, and with ways in which children can most economically represent this structure. The best moments occur in the Bruner school, when the experimenter combines his characteristic concern for the integrity of the children; when self-discovery is meant both ways: the self-discovering and the discovery of self; when the special emotional loadings of the children's responses to honest materials are not avoided or merely tolerated but sought for and welcomed as added opportunities for deepened learning.

These influences of Bruner lead us back to Kohl's treatment of the open classroom. It is not easy to find ways of teaching not based on compulsion but on participation; not on grades or tests or curriculum, but on pursuing what interests the students. "The development of open, democratic modes of existence is essentially the problem of abandoning the authoritarian use of power and of providing workable alternatives. That is a problem that must be faced by all individuals and institutions that presume to teach."[8]

One of the most advantageous aspects of the open classroom philosophy is the establishment of open interaction among the students and teachers.

> The important point, however, is that in an open classroom the teacher is no more required to behave like a "teacher" than the students are required to be submissive children. The teacher needn't always be at the front of the room and lead, nor does he have to speak "proper" English, nor defend a rigid system of "right" and "wrong". He can be in the classroom the same complex person he is in life and relieve himself of the strain of assuming what he thinks to be the appropriate persona. He can use his own experiences to help his stu-

---

[7] Bruner, "The Relevance of Education," pp. 116–117.
[8] Herbert Kohl, *The Open Classroom*, (New York: The Vintage Books, 1969), p. 16.

> dents with theirs. . . . One way of beginning a school year is by telling the pupils about yourself—where you came from, where you are, and where you think you are going. Then it may make sense to the students to talk of themselves in reasonably open and honest ways.[9]

Lesson plans are supposed to spell out what the teacher is going to do from day to day in his classroom. If they are followed closely, there is little opportunity for side issues to develop, there is little chance for unexpected discoveries, and certainly there is little time for unplanned conversations to spring up. Digressions make teachers feel nervous and guilty. "When people talk to each other and find out about each other they are not wasting time nor is it wasted when students explore what is interesting to them, nor even when students, weary of reading, play a bit, or just sit and draw. There is no one way to learn, nor are there specific stories or experiments all young people must go through." [10]

Teacher education programs have to help teachers realize that there is nothing sacred about standard curriculum outlines. Teachers have to be aware that providing children with ways of exploring their own questions is an important and valid learning experience. The activities and questions and conservations which develop spontaneously in a classroom are much more likely to foster real learning than covering a paper sequence of topics. The difficulty is to reassure teachers and instill in them the necessary confidence they will need to shed the feelings that they are not teaching anything unless they are lecturing.

Learning theory comes to the classroom through effective curriculum planning. A special study institute was held by the John Tracy Clinic under contract with the California State Department of Education at El Segundo, California in 1967. The goal for this institute was to develop a plan and a procedure for devising a curriculum for the education of the deaf. Dr. Robert Naslund, Professor of Education at the University of Southern California, in his opening remarks stated: "My belief is that despite his handicap the deaf child is characterized by a wide range of potential abilities which he shares in kind with other more normal children. I also believe that the purpose of education for the deaf, as for all children, is to assist them to develop those abilities and to become contributing citizens in our democracy." [11] It is a basic assumption that much of what is happening in "normal" education is very adaptable for "deaf" education. If this conviction is sound then the basic goals we seek in developing curriculum for the deaf are not different than the objectives sought in educational planning for all children.

Procedures needed to develop curriculum processes are illustrated by the following kinds of activities:

1. Faculty meetings should be focused on the professional problems involved in curriculum design. These sessions should include reports of progress, reviews of new materials, discussions of teaching approaches, analysis of data about children as they relate to program planning, design of evaluation procedures or instruments.
2. In-service education programs for teachers and others should be an integral part of curriculum improvement. Schools and school systems can no longer assume that teacher education has been completed

---

[9] *Ibid.*, pp. 32–33.

[10] *Ibid.*, p. 52.

[11] Edgar L. Lowell, ed., *Curriculum Planning for the Deaf, A Special Study Institute* (California: State Education Department, 1967), p. L–1.

when the basic credentials have been earned by those employed in or out of the classroom. All must feed into program development and improvement, since this is the basic reason why schools exist.

3. We need to give thought to the professional day and year as they relate to curriculum design. Adequate time has to be provided for it; not squeezing time out for it after a long day of teaching.

4. We must provide adequate facilities and equipment to do the job. This notion includes the concept of a well-stocked professional library.

5. We must do even more than we have in the past to create the professional climate and morale needed to accomplish the task.[12]

The discussion of Dr. Naslund's presentation revolved around a search to define curriculum in deaf education. "It is a plan to develop the human being into a self-realized person, a social being who becomes an economically useful individual. It is an open ended thing."[13] A second definition which is similar to the preceding is that curriculum is all the experiences of children in the school that are used for the purpose of education. A curriculum for deaf children would differ from one for normally hearing children at the point of materials, techniques, and strategies. The main and overriding consideration is language experiences for the development of communication skills.

In order to provide an adequate curriculum for the deaf, teachers must be aware of the deaf child's process of learning and of the specific ways in which deafness modifies the learning patterns demonstrated by hearing children. Bruner discusses the process of concept formation and concept attainment. Concept formation is the ability of the individual to place objects and events into appropriate areas of categorization. Concept attainment is the more difficult ability in which the individual defines the qualities which permit an object or event to be assigned to a specific category. The presentation of concepts to the child then is an orderly process which gives the child a basis for generalization and abstract behavior. In a curriculum for the deaf it is impractical to refer to content as a body of facts, for facts are isolates which are soon forgotten and have little impact on the total development of the individual.

In Bruner's concept of a spiralling curriculum, he suggests that there are basic concepts necessary for effective functioning. The task of teaching is one of helping the child perceive the structure of a subject in terms of the child's way of seeing things. The theoretical construct must be based on the knowledge of the learning process in man and on the manner in which deafness modifies this process. Flexibility must be a quality of the curriculum in order to excite the teacher to a new creativity. The goal is to achieve increased productivity in terms of new ideas for better strategies of teaching. To the educator of the deaf remains the tremendous task of making choices and adapting the material provided to the needs of the deaf. No educator can be expected to face these daily decisions without an adequate preparation program. The theoretical construct for a teacher inservice program must be based on the knowledge of the learning process in man and specifically on the manner in which deafness modifies this process. The knowledge already acquired about the education of the deaf and the knowledge about how to prepare teachers to utilize that knowledge cannot be discarded, but provisions have to be made for a dynamic instrument which can easily incorporate today's and tomorrow's advancements.

---

[12] *Ibid.*, pp. I–12 and 13.
[13] *Ibid.*, p. I–15.

Teachers should be described as designers of learning experiences. Teachers should have the potential to handle interpersonal relationships. If they are unable to do so, it should not matter how many hours of graduate credit they have accumulated, they should not be given the title of teacher.

Teachers have to set their classrooms as places for discovering: spontaneity, joy in learning, pleasure in creating, a sense of self. They must ask why they are doing what they are doing and why. Teachers need insights into their purposes as teachers. To facilitate an awareness of self, sensitivity training should be incorporated into the programs. Teachers need an education that will explain the nature of their learning process and how it relates to and affects the learning of their pupils.

Teachers should analyze and evaluate their own teaching behavior. This evaluation must be an on-going process until the end of their teaching careers. Too many teachers lock themselves into a set way of proceeding and never allow themselves the opportunity to revamp their approach to education.

Break the dichotomy between actions and words in teacher preparation programs. Do away with the listen and take notes method of educating. Introduce conflicts as a way into problem solving techniques. Teach empathy. Tolerate ambiguity. Student and teacher together investigate, probe and decide. A good teacher will stimulate and facilitate learning. Establish a risk-taking atmosphere. Each teacher has to discover his own best way of engaging in the act of teaching. In a given program, can the student teacher ask the question: "Is it alright to be me"?

BIBLIOGRAPHY

Waskin, Yvonne, and Parris, Louise. *Teacher/Pupil Planning*. New York: Pitman Publishing Corp., 1967.

Noar, Gertrude. *Individualized Instruction*. New York: John Wiley and Sons, Inc., 1972.

Macdonald, James, and Andersen, Daniel, and May, Frank. *Strategies of Curriculum Development*. Columbus: Charles E. Merrill Books, 1965.

Johnson, Stuart, and Johnson, Rita. *Developing Individual Instruction Material*. Palo Alto: Westinghouse Learning Press, 1970.

Knick, Frederick, and Childs, John. *Technical Change in Schools and Society*. New York: Holt, Rinehart, & Winston, 1968.

Tyler, Ralph W. *Basic Principles of Curriculum and Instruction*. Chicago: The University of Chicago Press, 1949.

DIAGNOSTIC PRESCRIPTIVE TEACHING: A MEANS TO INDIVIDUALIZED INSTRUCTION AND IMPLEMENT AN EDUCATIONAL PACKAGE THROUGH ASSESSMENT AND DIAGNOSIS

Linda Schafbuch, Diagnostic Teacher, Kendall Demonstration Elementary School, Washington, D.C. and Linda Alprin, Materials Resource Specialist, Kendall Demonstration Elementary Schools, Washington, D.C.

Today I want to describe briefly the Educational Program (EP) system now in use at Kendall School. Before I begin to describe the

EP, I'd like to say that the system is being constantly revised and updated, and that details I give you today may be changed in six months or a year from now. The basic theme, however, is one that the school is committed to, and it should remain constant over a period of time. Also, I would like to say that some aspects of the system are planned for implementation but have not yet been worked out in detail.

DESCRIPTION OF THE EP

The EP is a developmental list of numbered behavioral objectives in three main areas—Basic Skills, Required Skills and Humanities. The objectives are to be thought of as test items, not as a curriculum.

EP IN THE KDES SYSTEM

Using the basic skills section as an example, I will describe how the EP fits into the other components of the system. The EP provides one source of base line data on the children. We use the EP test kit and all its various components to gather and interpret base line data, as well as to keep a continuous record of progress for each child. The teacher bears the main responsibility for getting these data, but she is assisted by the psychologist and others who are familiar with the testing procedures.

Having determined, through testing of EP items and other sources a profile of strengths and weaknesses for each child in her class, the teacher is now ready for planning. She is aided by the EP objectives because the listing is developmental, but the components of curriculum support and materials support are probably more important to her at this point. Both of these types of support are or will be cross-referenced to the EP objective numbers.

In the area of curriculum support, we have done very little such cross-referencing—only a sort of trouble-shooting guide which is connected with remediating weaknesses in specific areas as determined by EP or other testings. Plans are to cross-reference the Rhode Island Curriculum with the Grammar Section of the EP, as well as other curriculum guides as they are chosen or modified for KDES.

In the area of materials support, we have done a great deal. We have established a computerized materials retrieval system, which presently contains 300 plus materials and will top 1000 materials by next fall. These materials are retrievable by EP objective number, title, subject heading, etc. We are now working on a language code which will inform the teacher whether the language contained in the materials is appropriate for her children. Also, we will add an evaluation code, which will indicate how other users of the materials rated them.

How does all of this function in the actual classroom setting? Let's take a look at some partial testing results on Keith, a 5½ year old preschooler. We tested Keith on a patterning task (figure 1). He didn't do very well. There are several possibilities for this poor performance. We investigated two major areas more in depth: fine motor performance and patterning tasks. From the tasks we selected his level of fine motor functioning was determined. He appeared ready to learn the strokes of printing.

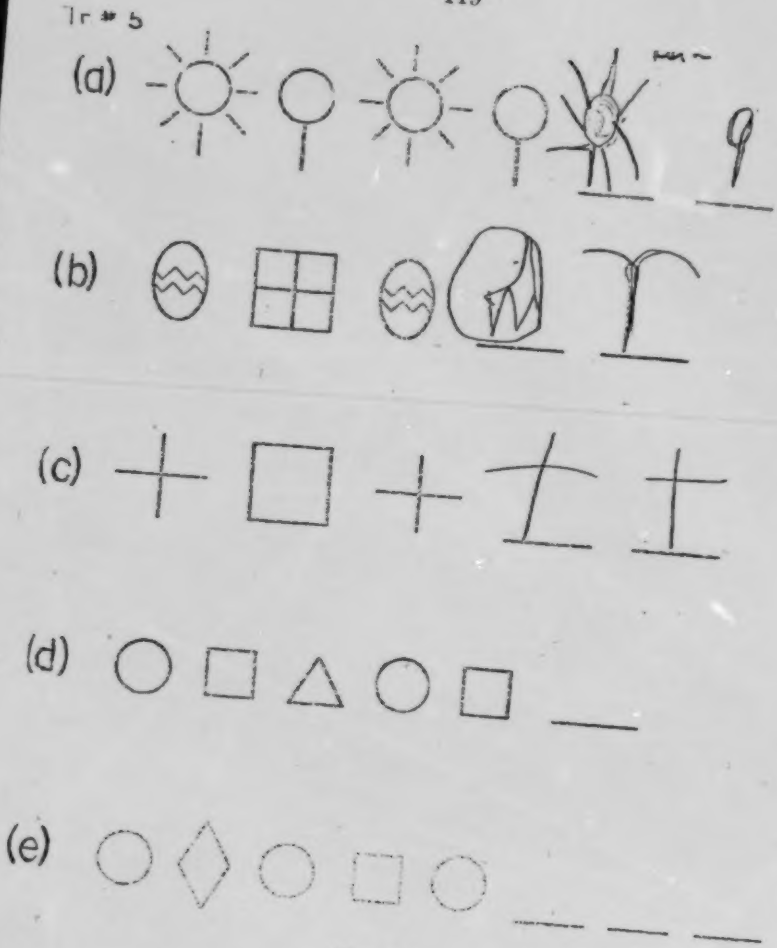


FIGURE 1

The easier patterning task indicated that he could learn to string beads, but needed to transfer it to a paper and pencil type patterning task.

Armed with the objective numbers for individual items and a plan for incorporating the skill building aspects into her lesson planning, the teacher can come to the Materials Resource Center, type the numbers into the computer terminal, and get a listing of all the materials for use with Keith.

RELATION OF EP AND DIAGNOSTIC CLASSROOM

Because the Diagnostic Classroom is keyed to the same numbering system and general orientation as the EP list of objectives, two things happen:

1. The teacher is aided in her interpretation of results from the Diagnostic Classroom.
2. She is also aided in finding materials to fit any prescription given by the Diagnostic Classroom teacher.

Finally, teachers working with the Diagnostic Classroom have gained valuable insight into becoming diagnostic teachers themselves. The EP and its component parts have promise in this area as well.

The Diagnostic Classroom developed out of two identifiable existing needs at Kendall School in August 1974.

1. A more complete evaluation of "intake children" and children to be evaluated for placement at Kendall.
2. A system to evaluate and diagnose children who were having difficulty in the learning process in the classroom.

A needs assessment of the teaching staff indicated a great need for this second item, and we have tried to provide an outlet for both teacher and student by helping to "trouble-shoot," pinpoint the child's problem, and provide a means of overcoming the problem area. Therefore, a "referral objective" became part of our function. As the year went on and feedback was gathered from teachers we had served, we decided to implement a third need—that of "in-service teacher training" in the areas of baseline assessment of all students and screening for problem areas.

The Diagnostic Classroom is part of Student-Family Services, and this year consisted of a diagnostic teacher and any diagnostic assistant, Betty Waddy-Smith. In dealing with the first phase, that of evaluating children for placement at Kendall, we were part of an intake team made up of Kendall's psycho-educational tester, social workers, audiologists, speech therapists, and the Student-Family Service coordinator.

The theoretical model for the Diagnostic Classroom has been eclectic and developmental this year. For the purpose of screening and baseline assessment, we have reviewed multiple listings of a child's developmental skills as well as incorporating teacher-stated sequential skills in the academic areas, and have informally tested these skills in the Diagnostic Classroom. From this information, we can profile a child's strengths and weaknesses within the educational program within a specific area. For example, we listed mathematical skills and tested the children. Each skill has a number which correlates with the educational program skill number. A child's placement can be found along a development continuum of the EP.

For the purpose of baselining and diagnosing, we used the Intellectual Development Framework based on Bruner and Piaget. It was necessary to choose such a framework, so as to place a child's learning ability into a frame of reference regardless of deafness. This frame of reference helped us make prescriptions on referral children. Basically, we considered each child as "knowing" on the inactive, iconic, and/or symbolic level. To paraphrase Bruner, "man passes through stages of development and in each stage he develops new tools for dealing with his environment. Cumulatively, these shall enable him to extend his knowledge. New learning appears to be developed sequentially through these three skills." (Robert Underhill, Teaching Elementary School Mathematics, Charles E. Merrill Publishing Co., 1972, p. 11.)

Thus, with having a developmental intellectual framework and a series of required academic skills, we were able to pinpoint, not only where the child was in relation to skills, but where his thinking and synthesizing ability lay.

Another theoretical model we used, especially with children referred, was a new trend in diagnostics based on Dr. Robert Prouty's Diagnostic Program at George Washington University in Washington, D.C. This trend places emphasis on what works for the child. Diagnostic data serves to enhance the child's learning in the regular classroom, not by just indicating what he does or doesn't know, but how he learns. These data make up what is called "Learning Style," and it is hoped that by examining the child's style of learning, we can involve the teacher more and avoid harmful labeling which often occurs in peripheral diagnostics. Through an analysis of learning style, various instructional strategies can be developed which serve as the methods of instruction and provide materials to be used (retrieval system), based on what was found in the baseline assessment and diagnosis. With all this information, objectives can be set.

To make the testing session less exacting and boring to the child, we made use of learning stations consisting of peg boards, slot charts, films, Project Life Pal system, language master, blackboard, and paper and pencil work.

The following discusses in depth the three phases of the Diagnostic Classroom.

Phase I

The diagnostic process for "intake children" consisted of the following:

1. The child is screened by use of a package, which consists of a few skills in all areas. This was helpful in giving direction to further testing.

2. The child is tested in depth in two basic skill areas which we found most important for trouble-shooting—those of memory and perceptual training.

3. The child is then tested in depth and profile sheets in all areas are made out on a child. Thus, a baseline assessment has been made and hopefully problem areas have surfaced.

4. The Diagnostic Classroom data and recommendations are taken to a staffing where the Student-Family Service intake team decides placement, based on data from the entire team's evaluation.

Phase II

The process for referral children from a Kendall classroom is:

1. Screening.

2. In depth testing in areas found in screening to be a problem and in areas the teacher indicated to be of concern.

3. After a definitive statement can be made about the problem areas (diagnosis), sample teaching will be done to analyze the student's "learning style" which includes rate of learning, appropriate rein-

forcers, strength areas, areas of interest, and the use of media and different teaching strategies. A completed package of this analysis and a prescription package will be given to the teacher indicating academic needs, outlining ways to remediate and/or develop certain skills, and an in depth view of what works for the child in the learning environment. Remediation is not done in the Diagnostic Classroom.

For example, if a child is referred for "memory" problems, we would plan five learning objectives and several strategies of instruction. For example, objective 1—the child will spell from memory the word "cat." Strategies (1) sand letters with fingerspelling and (2) use of overhead projector.

Phase III

As indicated at the beginning of this paper, we found that teachers whom we served wanted more information about diagnosis and how they could profile the rest of their children.

Thus, we began a system of having teachers come to the Diagnostic Classroom at which time we would discuss techniques in baseline assessment and trouble-shooting or problems. The idea here was that all teachers can use a technique to evaluate each child in their classrooms, and if that evaluation is done and problem areas screened out at the beginning of each year, the teacher has a ready-made individual lesson plan for each child. Then periodic evaluations could be made throughout the year and the child's progress recorded. It is obvious that via such evaluations, the end-of-the-year report panic time would be somewhat lessened.

FUTURE IMPLICATIONS

A system of feedback was developed in which teachers indicated if our information was relevant and helpful, and we are definitely pleased with the responses.

The third phase of the program will continue in the fall and this thrust for classroom-teacher diagnostics will be stressed. This will enable the Diagnostic Classroom to focus more effectively on intake children and referrals.

It has been extremely interesting that all of the children referred to us this year had similar problems of spatial relationship and sequential memory. Reversals were common to all. We cannot, at this time, make any judgment on these data but feel this opens an area for possible research.

The Diagnostic Classroom will continue next year as part of the Student-Family Services Program, and will expand as time goes on into KDES plans to develop an entire Diagnostic Unit, which will serve both the Kendall School community and a certain national geographic area.

BIBLIOGRAPHY

Baldwin, Alfred L.; *Theories of Child Development*; New York, London, Sydney: John Wiley & Sons, Inc., 1967.

Bangs, Tina E.; *Language and Learning Disorders of the Pre-Academic Child*; New York: Appleton-Cirtury-Crofts, 1968.

Cruickshank, William M.; *Psychology of Exceptional Children and Youth*; Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1971.

Farrald, Robert R. and Schamber, Richard G.; *A Diagnostic and Prescriptive Technique: Handbook 1: A Mainstream Approach to Identification, Assessment, and Amelioration of Learning Disabilities;* Sioux Falls, South Dakota: Adapt Press, 1973.

Gearheart, Bill R. and Willenberg Ernest P.; *Application of Pupil Assessment Information: For the Special Education Teacher*; Denver, Colorado: Love Publishing Co., 1970.

Jedrysek, Eleonora, et al.; *Psycho-educational Evaluation of the Preschool Child: A Manual Utilizing the Haeusser-Mann Approach*; New York and London: Grune & Stratton, 1972.

Kephart, N. C.; *The Slow Learner in the Classroom*; Columbus, Ohio: Charles E. Merrill Publishing Co., 1960.

Mann, P. H. and Suiter P.; *Handbook in Diagnostic Teaching: A Learning Disabilities Approach*; Boston: Allyn & Bacon, Inc., 1974.

Smith, Robert M.; *Teacher Diagnosis of Educational Difficulties*; Columbus, Ohio: Charles E. Merrill Publishing Co., 1969.

Underhill, Robert; *Teaching Elementary School Mathematics*; Ohio: Charles E. Merrill Publishing Co., 1972.

Valett, Robert E.; *Programming Learning Disabilities*; Belmont, California: Fearon Publishers, 1969.

Valett, Robert E.; *The Remediation of Learning Disabilities*; Belmont, California: Lear Siegler, Inc./Fearon Publishers, 1974.

Witsen, Betty Van; *Perceptual Training Activities Handbook*; New York: Teacher College Press, 1967.

APPRAISING CERTAIN LINGUISTIC STRUCTURES IN THE RECEPTIVE—SIGN LANGUAGE COMPETENCE OF DEAF CHILDREN

Elaine R. Costello, Ph.D., Center for Continuing Education, Gallaudet College, Washington, D.C.

Augustin A. Root, Ph.D., Area of Instructional Technology, Syracuse University, Syracuse, N.Y.

In order to insure the greatest benefit from a child's linguistic skills, it is necessary to be able to measure his developmental progress in language, regardless of communication mode or language variety. A research study was conducted concerning the problems of language assessment of young deaf children. It explored alternative testing procedures that might be effective for measuring deaf children's underlying language processing skills. The investigation utilized methods for testing receptive sign language in three identifiable sign language varieties, American Sign Language (ASL), Sign English, (i.e., a variety of sign language whose grammatical ordering basically follows English; however, it does not utilize English inflections and derivations, but does use some ASL grammatical constructions), and Manual English, (i.e., a variety of sign language which uses signs within an English grammatical syntax and includes signs for English inflections and derivations). The testing procedures were based on the characteristics of these sign language varieties being tested as well as biological and developmental language acquisition patterns as defined by Brown (1973) and Schlesinger and Meadow (1972).

Until recently, the majority of primary, academic programs for deaf children have emphasized oral skills, including speechreading and auditory training. The large body of educators who have advocated an oral approach believe that the use of sign language with deaf children at an early age will restrict or prevent development of speech and language skills, despite evidence to the contrary (e.g., Stuckless & Birch, 1966; Vernon & Koh, 1970). Moreover, some educators are concerned that some forms of sign language, i.e., ASL, present information within a non-English syntax and morphology which will encourage "ungrammatical" language development. Until recently the use of sign language has been reserved for older deaf children, in addition to oral-failures and multiply handicapped (Moores, 1971). However, regardless of the communication method used, the teaching of English has appeared to remain the principle aim of the education of deaf children.

Current research on the academic achievement of deaf children is beginning to challenge traditional polices with embarrassing data attesting to the failure of schools to graduate linguistically competent students (Furth, 1966; Moores, 1970). Researchers are providing evidence that much of the lack of success within our schools for the deaf reflects prevailing attitudes regarding the linguistic differences of minority groups within the United States. Generally, Americans have reacted with suspicion toward those using a foreign language, a heavy accent, or even, a different dialect (Meadow, 1972). Johnson (1969) reviewed the implications of the non-acceptance of minority cultures and languages upon educational practices. He concluded that traditional English programs not only fail to teach English but consequently cause the students to be poor achievers in other subjects as well.

In an attempt to provide a better communication system through which to teach English, many schools are accepting and encouraging the use of a combination of communication systems, of which sign language is a part. This is a step toward accepting the priorities that Furth (1973) has outlined for deaf children: ". . . first, acceptance of the deaf person and his way of life; second, the thinking and feeling self; third, communication; fourth, language (English); and fifth, speech" [p. 100].

There is a full range of language varieties along the diglossic continuum between ASL and Manual English (Woodward, 1973). If a teacher could assess the deaf child's entering linguistic behavior along this continuum she could build upon the deaf child's existing competencies. When a teacher communicates her disapproval and lack of understanding of the child's language, she may close off the child's communication mode and her most advantageous teaching tool. By assessing the child's underlying competencies, the teacher can provide an educational environment in which she can reflect an acceptance of the child's expressions, while demonstrating linguistic models that provide for development of more complex grammatical rules.

Studies in language acquisition support the assertion that understanding precedes production (Brown & Bellugi, 1964; Fraser, Bellugi, & Brown, 1963). Particular utterances or features of an utterance are ordinarily understood before the same utterances or features are produced. Comprehension, i.e., understanding, has been used in recent studies with deaf children to give insight into the acquisition of linguistic rules" (Chomsky, 1969; B. Gardner & R. Gardner, 1973; Power & Quigley, 1973; Schlesinger & Meadow, 1972).

Bellugi-Klima (1971) has developed some comprehension tests for syntactic constructions based on current developmental studies (Brown, 1970). She developed test items in such a way that correct answers can be obtained only if the child comprehends the particular construction that is being assessed. In the present study, test items were designed based on her suggestions for measuring linguistic development. These constructions were presented to the subjects (*Ss*) on video tape in the different sign language varieties. The *Ss* responded to the taped constructions by manipulating objects or pictures to indicate a comprehension of the construction.

The investigation was considered exploratory research in the area of psycholinguistics. A quasi-experimental design was used in which the stimulus materials in three alternative sign languages were presented to one group of *Ss*. Twenty deaf children between the ages of 5.5 and 8.0 at the Maryland School for the Deaf in Frederick, Maryland, and at the West Virginia School for the Deaf in Romney, West Virginia, served as *Ss*. All *Ss* had at least an 80 dB hearing loss and were prelingually deafened. The following tables describes the *Ss* from the two schools.

Group	Number	Mean age	Age range	Mean hearing loss
West Virginia	6	6.3	5.10–7.1	91.9
Maryland	14	6.7	5.5 –7.11	105.6

All *Ss* were described further in terms of etiology, sex, degree of hearing loss, familial hearing loss, method of communication used at home, educational background, and frequency of going home. This information was used in the analysis to determine the effect that each of these variables has on linguistic development.

The following is a list of the five kinds of constructions that were selected and an example of a test item for each construction:

Construction:	*Example*
Active sentences	The girl washes the baby.
Singular-plural nouns	Show me the dogs.
Negative-affirmative statements	The horse is not walking.
Negative-affirmative questions	What can't you drink?
Adjectival modification	The small boy has a big dog.

For each construction a set of two test items was assigned which demonstrated variations in production within each of the three sign language varieties. An additional plural item was added in each language so as to assure measuring the different ways of expressing plurality. The final test consisted of eleven items in each of the three languages, making a total of thirty-three items, whose only clues to the correct answer were the syntactical structure. An informant who was fluent in all of the sign language varieties was video taped expressing each construction in its assigned language variety. The final edited video tape consisted of the presentation of the vocabulary, sample items, and the randomly ordered test items.

Each child was tested individually in a quiet place following the procedures suggested by Bellugi-Klima (1971). After the sample items, the constructions were presented one at a time on the TV monitor with 20 second pauses between each one to give the child time to manipulate the objects in response to the construction. The entire testing procedure took about 20 minutes for each child. Each test item consisted of a signed stimulus on the TV monitor and the child responding by selecting the objects/pictures that were indicated in the construction. The task for the test consisted of two alternative choices for each item and the child simply placed his choice (a picture or object) in a felt-lined cake pan. The examiner recorded "1" if the child responded correctly and "0" if his response was incorrect.

The data from the study were analyzed in two major ways. Implicational analysis was used to demonstrate the order of acquisition of some of the linguistic constructions and multiple linear regression was used to sort out those variables which contributed to linguistic development in the sign language varieties.

Implicational models have been used by linguists for the demonstration of variation in language (DeCamp, 1968; Stolz & Bills, 1968). Generally, such a model has a given set of features, A, B, C, D, which may be arranged in such an order that A>B>C>D. This implicational model provides a way of predicting the presence of features within a lect (i.e., an individual's language competencies as influenced by regional, ethnic, or other socio-influences). For instance, this model predicts that if a lect has feature A, it will also have B, C, and D; if it does not have A, but has B, it will have C, and D, and so on. Although, for a non-implicational set of four features there are 16 mathematically possible lectal arrangements, most language features seem to be implicationally ordered so that there can only be five lects, ABCD, BCD, CD, and D, and none of these.

In the present research, implicational analysis was used to describe the acquisition of four of the constructions test: Negative Questions, Negative Statements, Affirmative Questions, Affirmative Statements. The data show that these constructions are implicationally ordered in relation to each other and provide strong support for their order of acquisition in sign language. These data offer further proof that the same sequence of acquisition of certain linguistic structures occurs in spoken language as in each of these sign language varieties.

An analysis by multiple linear regression showed that only three factors seemed to explain the variability in ASL at a significant level, the degree of hearing loss, whether or not the *Ss* had a deaf teacher and/or houseparents, and the frequency of going home. No factors had significant explanatory power in the other two language varieties. There are no available data that support any reasons for the significance of these factors only in ASL. The degree of hearing loss logically would have an effect in linguistic development, but why should this effect be evident in only one language variety and not the others? The same question applies to the role of deaf staff members and the frequency of going home, i.e., Why is the effect evident in only one language variety? It appears that frequent going home has an adverse effect on linguistic development in ASL which tends to suggest that the language models and/or stimulation that the deaf child gets from his deaf peers contributes to his development in ASL.

The data from this research suggest the following conclusions. Implicational analysis provides a useful framework for examining the order of linguistic development. The order of acquisition of the constructions appraised within this study follow the same order of acquisition as occurs in spoken language. Linguistic development, as measured in the present study, had little dependence on age. Receptive sign language appears to provide evidence as to a deaf child's language processing skills. The *Ss* performance in the different sign language varieties did not seem to be dependent upon the variety used at home or at school; however, it appears to be influenced by that variety used by their peer group, houseparents and teachers. It appears that going home daily may have a negative effect on linguistic performance in ASL and should be studied on a larger scale. This may be related to the role of inculturation in learning ASL. Most *Ss* who did well in one language variety also seemed to do well in the other two varieties. It may be shown in future tests that it is necessary to measure processing skills in only one variety. However, since there were obvious differences in scores between varieties, it will be necessary to determine if one, and which one, variety is predictive.

REFERENCES

Bellugi-Klima, U. Some language comprehension tests. In C. Lavatelli (Ed.), *Language training in early childhood education.* Urbana: University of Illinois Press, 1971, 157–169.

Brown, R. *Psycholinguistics.* New York: Free Press, 1970.

Brown, R. *A first language: The early stages.* Cambridge: Harvard University Press, 1973.

Brown, R. & Bellugi, U. Three processes in the acquisition of syntax. *Harvard Education Review.* 1964, 34, 133–151.

Chomsky, C. *The acquisition of syntax in children from 5 to 10.* Cambridge: M.I.T. Press, 1969.

DeCamp, D. Toward a generative analysis of a post-creole speech continuum. In D. Hymes (Ed.), *Pidginization and creolization of languages.* Cambridge: Cambridge University Press, 1968, 349–370.

Fraser, C. Bellugi, U., & Brown, R. Control of grammer in imitation, comprehension and production. *Journal of Verbal Learning and Verbal Behavior,* 1963, 2, 121–135.

Furth, H. G. *Deafness and learning: A psycho-social approach.* Belmont, California: Wadsworth Publishing Company, 1973.

Furth, H. G. *Thinking without language: Psychological implications of deafness.* New York: Free Press, 1966.

Gardner, B. & Gardner R. Comparing the early utterances of child and chimpanzee. In A. Pick (Ed.), *Minnesota symposium on child psychology.* 1973.

Johnson, K. Pedagological problems of using second language techniques for teaching standard English to speakers of nonstandard negro dialect. In A. Aarons, B. Gordon, and W. Steward (Eds.), *Linguistic-cultural difference and American education.* Florida FL Report, 1969, 7, 78–80.

Meadow, K. Sociolinguistics, sign language, and the deaf subculture. In T. O'Rourke (Ed.), *Psycholinguistics and total communication: The state of the art.* Washington, D.C. American Annals of the Deaf, 1972.

Moores, D. Psycholinguistics and deafness. *American Annals of the Deaf,* 1970, 115 (1), 37–48.

Moores, D. *Recent Research on manual communication.* (Occasional Paper No. 7) Minneapolis: University of Minnesota, 1971.

Power, D. & Quigley, S. Hearing impaired children's comprehension and production of syntax in oral language. *Journal of Speech and Hearing Research,* 1973, 16 (1), 5–11.

Schlesinger, H. Meaning and enjoyment: Language acquisition of deaf children. In T. O'Rourke (Ed.), *Psycholinguistics and total communication: The state of the art.* Washington, D.C., American Annals of the Deaf, 1972.

Stolz, W. & Bills, G. An investigation of the standard-non-standard dimension of Central Texas English. Unpublished manuscript, 1968.

Stuckless, E. & Birch, J. *The influence of early manual communication in the linguistic development of deaf children.* 1966, 111, 452–260; 299–504.

Vernon, M. & Koh, S. Effects of manual communication on deaf children's educational achievement, linguistic competence, oral skills, and psychological development. *American Annals of the Deaf*, 1970, 116, 527–536.

Woodward, J. C., Jr. Language continuum: A different point of view. *Sign Language Studies*, 3, 1973, 39–46.

A COMPARISON OF SIGNS USED BY MOTHERS AND DEAF CHILDREN DURING EARLY CHILDHOOD

Kathleen Crandall, Ph. D., Rochester Institute of Technology—NTID, Rochester, N.Y.

Recently, some educators have advocated exposing the deaf child to a manual form of language which directly resembles spoken language while concurrently providing the child with an opportunity to acquire auditory and speechreading skills. At this time, the question remains as to whether the deaf child will acquire English proficiency through this multifaceted exposure. For the deaf child to be able to gain language proficiency in English through a manual language, the visual channels must be able to stimulate his language learning mechanisms with usable English linguistic information as do the auditory channels for the typical hearing child.

Through the use of manual English, we are assuming that enough pertinent linguistic information can be conveyed by the hands so the language learner will have a better opportunity to master English than if he were exposed to only speechreading and limited auditory clues. However, we do not know if the structure of one language—ASL—can be altered to teach another language and, conversely, if the means of production—speech—of English can be altered.

We are, at present, faced with two important unanswered questions which relate to the forming of a rationale for the use of manual English: 1) Can the young deaf child identify and integrate usable linguistic clues when being exposed to varieties of communicative modes and structures, i.e., gestures, ASL, manual English, fingerspelling, speechreading, and amplified speech? 2) Can the structure of one language be conveyed to the language learner through a mode not native to that language? This study was designed to investigate the sign language learning of deaf children in an effort to obtain information on the above questions. Since the use of manual English has become an educational reality, information relative to one of its goals—the promotion of English proficiency in the deaf—is needed. We now have a sizeable portion of deaf children who are being exposed to manual English. It therefore becomes feasible to study how these children acquire this language system; what pitfalls, if any, may exist; and how the educator may facilitate language learning in this mode.

It was hypothesized that in the acquisition of sign language, the deaf child progresses through developmental stages, and that his parents' use of sign language has a significant impact on his acquisition of a visual language system. In order to investigate this hypothesis, the following questions were studied:

1. What is the developmental pattern for the deaf child's use of chers and grammar of manual English?

2. Is the mother's use of sign language chers and grammar an indicator of the child's sign language abilities?

Procedures

For the purpose of this study, variables were defined as follows:

Exposure.—A child acquires language through his environment. Even though human beings may be predisposed to language learning, the language or languages which they master are culturally determined. Thus, when the deaf child learns sign language, that sign language which is a part of his environment must be studied, i.e., the manner in which the prime language model in the child's life—his mother—uses the language. A representative language sample of each child's mother was analyzed to determine the chers and grammar used with the child. In the area of exposure, the following variables were considered: (1) Age of the child; (2) chers used by mother; and (3) grammar used by mother.

Linguistic knowledge.—A child does not appear to learn the three basic dimensions of his language uniterally or independently of each other. The acquisition of vocabulary, grammar and chers of manual language are interrelated. When one aspect of language learning is investigated, it is also important to have developmental information on the other aspects. The following variables were considered as linguistic knowledge: (1) chers used by child, and (2) grammar used by child.

Population.—The population for this study included those children who met the following selection criteria: (1) an average hearing loss for the frequencies 250 through 4000 Hz which was 80dB ANSI or greater, (2) onset of deafness before the age of two years, (3) parental use of manual English with the child before the age of four years, (4) overall visual, nonverbal (performance) intelligence which was at least within the average range, i.e., an I.Q of 90 or greater on the Hiskey-Nebraska Test of Learning Aptitude, (5) peripheral vision within the normal range (20/30 vision or better with or without corrective lenses, (6) absence of apparent motor disability, and (7) no indication of emotional disturbance. Table 1 shows the description of the distribution of selection criteria for the population studied.

TABLE 1.—DESCRIPTIVE CHARACTERISTICS OF POPULATION

Characteristic	Mean	Standard deviations
Age of child (months)	65.10	13.54
Hearing level (decibels)	102.55	6.48
Child's age at initial parental use of sign (months)	24.90	18.97
Hiskey-Nebraska I.Q	119.90	19.12

Collection of language data.—Each child was observed in a langauge stimulating environment and language productions were video taped on a portable unit. Language stimulating materials consisted of mounted picture sequence stories (Robinson, H. M., et al., 1965, 1965a, 1965b). The child's mother was asked to tell the child a story from one of the pictures and respond to any of the child's comments or questions. Then she was to ask the child to tell her what he saw and if possible a story from the other pictures. If the child had a favorite picture story book, this was also utilized if necessary. A sample of typical two-way conversations that take place between the mother and the child was the desired goal. All language samples were collected in the home to increase the likelihood that a true sample of the child's language would be collected.

Language samples used in this study were collected during several one-hour periods within a span of two weeks. Language samples for both the child and his mother were transcribed in two ways. The notational system of Stokoe et al. (1965) was utilized for one transcription and English written word equivalents for the second transcription. Utterances transcribed with blanks, i.e., visibly unintelligible portions, were not included as part of the 100 necessary signed utterances. The same portion of the combined transcription was utilized for all linguistic analyses. The 100 utterance count was begun after an initial warm-up period of five to ten minutes. The mother's and child's utterances were transcribed as they consecutively occurred in sequence.

The transcriptions of visual aspects (chers) were organized for each child and mother as follows for analysis: (1) List of location chers used by subject, (2) List of configuration chers used by subject, (3) List of movement chers used by subject. Rules used for classifying chers as similar or different were developed based on the Stokoe et al. (1965) analyses (Crandall, 1974).

The English word equivalent transcriptions in conjunction with the transcription of chers were analyzed as follows:

1. A mean length of utterance in sign-morphemes (MSMU) based on Brown's (1973) rules for spoken English was calculated for each subject. These rules are reported in detail by Crandall (1974).
2. The number of signed utterances per 100 consecutive signed utterances which were grammatically correct by adult English standards was determined. Rules for the procedure are reported in detail by Crandall.
3. A list and frequency count of functor morphemes used by each subject was made.

Results

Production of chers.—The number of different chers used by children and their mothers were categorized by classification type—tab (placement of sign) chers, dez (configuration) chers, and sig (movement pattern) chers (Table 2). Younger children tend to use less of a variety of tab chers than the older children. However, this difference was not statistically significant ($F=2.11$, $p>0.05$). The five most frequently used tabs for the total sample were in order of decreasing occurrence

0, ‿, □, ⌒, *and* [ ]

The same five tabs occurred in all groups. The 0 tab ranked first in all groups. This tab is used for more signs than any other tab according to Stokoe, Casterline, and Croneberg (1965).

TABLE 2.—NUMBER OF DIFFERENT CHERS BY TYPES USED BY 3 AGE GROUPS OF CHILDREN AND MOTHERS

Group	Number	Tab		Dez		Sig	
		Mean	Standard deviation	Mean	Standard deviation	Mean	Standard deviation
42 mo to 55 mo children	5	13.60	2.30	16.40	3.78	22.60	2.07
56 mo to 69 mo children	7	17.57	4.89	22.00	2.94	22.29	1.98
70 mo to 83 mo children	8	16.75	2.19	21.75	2.66	23.63	.92
Total children	20	16.05	3.32	20.50	3.77	22.90	1.68
Mothers	20	17.90	3.16	24.80	3.72	22.65	2.94

The use of a greater variety of tabs by the two older groups was due in part to the use of more two-handed signs for which movement was observed on only one hand. The youngest group used a mean number of 3.80 different hand shapes which functioned as tabs, the second group a mean of 5.29, and the oldest group a mean of 5.63. The childrens' ability to use tab chers appeared well developed by the age of five years.

With respect to dez chers, the older groups of children tended to use a greater variety of dez chers than did the younger group. The tendency for the number of different dez chers to increase with age was significant at the 0.025 level of probability (F = 6.01). No deletion dez chers used most frequently by the 20 children in this study were in order of decreasing occurrence, G, 5, B, O and C.

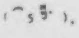
Little variation was observed in the total number of different sig chers used by the three age groups of children. The sig chers used most frequently by the children in the study were in order of decreasing occurrence and V. All groups of children were observed to use the x

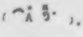
x , ⊥ , # , > ,

sig more frequently than any other sig. The same five sig chers occurred across all groups with the exception of the youngest group where the

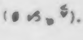
cher ranked third in frequency. Only one sig, the
action) cher, was found which was not used by over half the children studied. Eleven children were observed never using this sig; no age patterns related to its use could be discerned.

Often when a child encountered difficulty in producing the dez component of a sign, the correct sig was retained. For example, cow





cow
and airplane"



The performance of the children in the study indicated that the ability to use sig chers appears to be well developed by the age of 42 months.

The relationships between a child's and mother's use of chers were studied by applying step-wise regression analysis procedures.

The number of different chers used by children were significantly correlated with the number of different chers used by their mothers. The tab cher correlation between mothers and children yielded an r of 0.72 ($p < 0.01$); the corresponding dez correlation was 0.47 ($p < 0.05$); and the sig correlation was 0.52 ($p < 0.05$). Child and mother cher production variables which proved significant ($p < 0.01$) in predicting the number of different tab chers used by the deaf child were in the order of their significance:

1. The number of different sig chers used by the mother.
2. The number of different tab chers used by the mother.

The factor which was of significance ($p < 0.01$) in the prediction of the number of different dez chers used by the deaf child were:

1. The number of different sig chers used by the mother.

The variables selected as good predictors of the number of different sig chers used by the deaf children in the study were:

1. The number of different dez chers used by the child.
2. The number of different tab chers used by the mother.

These results indicate that the deaf child's acquisition of the three cheremic aspects is interrelated; the child who learns one type of cher is also learning the other types.

Grammatical proficiency.—The mean sign morpheme per utterance (MSMU) calculated for children in this study ranged from 1.28 to 5.18, mean 2.842, standard deviation 1.059. There was not a statistically significant difference between the MSMU's of deaf children of hearing parents and deaf children of deaf parents ($F = 0.69$, $p > 0.05$). There were significant differences between the MSMU's of the youngest group and the two older groups ($p < 0.05$). Children in Group 1 (mean age 45.60 months) had a group MSMU of 1.81 which is numerically equivalent to hearing children studied by Brown (1973) at Stage I. Brown was able to compare and analyze 24 grammars of five different languages for 18 children at Stage I. He reported that the increases of complexibility occurring in Stage I were the same for all the children in languages that have been studied thus far. The data collected in the present study indicated that all of the deaf children with MSMU's at Stage I were expressing the seven minimal two-term semanic relations discussed by Brown. Table 4 presents the children's and mother's MSMU's by stages. The upper bounds recorded for children in Stages I, II and V are within acceptable distances reported by Brown (1973).

Deaf mothers did not differ significantly from hearing mothers with respect to MSMU ($F = 0.001$, $P > 0.1$). The group MSMU of the mothers is equivalent to a State IV MMU. Language samples collected from mothers communicating with their children are probably not representative samples of their actual language proficiency.

TABLE 4.—MSMU AND UPPER BOUND FOR CHILDREN AND MOTHERS INCLUDED IN THE STUDY BY STAGES USING BROWN'S MMU CRITERIA

Stage	Criteria		Child's CA in months	MSMU of child	Upper bound of child	MSMU of mother
	MMU range	Upper bound				
I	1.0 to 2.0	5	42	1.28	3	1.23
			[1]43	1.44	4	3.11
			58	1.75	5	2.20
			50	1.87	5	3.27
II	2.0 to 2.5	7	49	2.00	7	3.63
			66	2.33	5	2.48
			83	2.41	6	3.51
			[1]44	2.49	7	3.80
III	2.5 to 3.0	9	[1]69	2.57	7	3.37
			[1]83	2.57	7	2.45
			71	2.70	12	2.83
			78	2.72	9	2.38
			[1]58	2.74	7	3.73
			68	2.89	12	4.76
IV	3.0 to 3.75	11	72	3.34	10	4.36
			[1]65	3.59	16	4.64
V	3.75 to 4.25	13	76	3.79	13	5.38
			81	4.54	11	3.92
			70	4.64	15	6.17
			76	5.18	16	6.34

[1] Deaf children of deaf parents.

Bellugi (1972) reported that fewer signs than words are used to convey the same idea. With this finding in mind, one cannot claim on the basis of MSMU that the mothers in the present study were communicating less with their deaf children than would mothers of hearing children.

The relationships between a child's MSMU and other child linguistic performance variables as well as the linguistic performance variables of mothers were investigated. The child and mother language factors which were found to be significant ($p<0.01$) in predicting the child's MSMU were:

1. The number of different functor morphemes used by the child.
2. The MSMU of the mother.
3. The number of gramatically correct English utterances in the child's 100 signed utterances.

When only the mother's MSMU was included in the regression equation, it was able to predict 67.93% of the total variation in the children's MSMU. Thus, the child's MSMU is highly dependent upon that of his mother.

Brown (1973) reported that the increase in MMU at Stage II is primarily due to the addition of functor morphemes. The average MSMU for the 20 deaf children was 2.83 morphemes or just beyond Brown's Stage II. Therefore, because the number of functors was a good predictor of MSMU, it appears that deaf children's MSMU is also sensitive to the use of functors.

The relationships between a child's and mother's use of grammatically correct English were also investigated. The mother's use of correct English accounted for 76.78 percent of the total variation in the child's use of correct English. This finding suggests that a child can learn grammatically correct English through sign language if it is used consistently by the language models in his environment. However, the low number of gramatically correct English signed utterances actually used by the mother in this study (Mean = 18.10 percent) suggests that at least for the mothers in this study it was difficult to use a form of signed English which directly resembled spoken English.

The greatest growth in the use of bound morphemes occurred between the two older age groups. At 42 to 55 months 0.288 percent of the morphemes used by children were bound morphemes; at 56 to 69 months 1.07 percent; and at 70 to 83 months 3.38 percent. The increased use of bound functor morphemes with age was statistically significant ($F = 4.48$, $p < 0.05$).

Morphemes	Number of occurrences Total sample	Group 1	Group 2	Group 3
Past $(\emptyset\sqrt{B}_T^{?})$ or $([\,]\sqrt{B}_T^{?})$	51	2	9	40
Present Progressive $(\emptyset I^{>})$	50	1	10	39
Plural $(\emptyset A_s^{\perp})$ or $(\emptyset A_s^{>})$	12	1	5	6
Past $(\emptyset D^{\perp})$ or $(\emptyset D^{>})$	13		2	11
Possessive $(\emptyset A_s^{a})$	4			3
Third Person $(\emptyset A_s^{\perp})$ or $(\emptyset A_s^{>})$	4			3

TABLE 5. *Frequency of occurrence for bound morphemes by age group and total sample*

Table 5 lists those six bound morphemes which occurred more than once in the language samples by age groups and for the total population studied. The order of acquisition of these bound morphemes in deaf children's sign language agreed favorably with the order of acquisition reported by Brown (1973) for hearing children. The best predictor of the number of different functors used by a child was his mother's MSMU. If the child's mother used more signed morphemes per utterance, the child used more functors. When considered alone, the Mother's MSMU was able to predict 79.92 percent of the total variations in a number of different functors used by the child.

CONCLUSION

The findings of this study showed that the most consistent factor upon which the child's development of sign language chers and grammar appeared to depend was the manner in which these aspects of language were used by his mother. Furthermore, children whose mothers tended to use grammatically correct English in their sign language were likewise able to use grammatically correct English in their sign language. The acquisition of the cheremic aspects of sign language does not appear to be affected by the use of grammatically correct English signs. However, the increased use of bound functor morphemes was related to ability to use grammatically correct English. This finding reflects the syntactical difference between uninflected English and inflected English. These findings led to the conclusion that the structure of spoken English could be conveyed to the language learner through manual gestures.

The results of the present study suggest that children will tend to reach only the linguistic competence level of their parents. It, therefore, would appear that parents and teachers must be given adequate instruction in the use of sign language and that this instruction should focus on the use of a form of sign language which directly resembles English.

REFERENCES

Bellugi, Ursula, Studies in sign language. In Terrance J. O'Rourke (Ed.) *Psycholinguistics and Total Communication: The State of the Art*, Washington, D.C.: The American Annals of the Deaf (1972).

Brown, Roger, *A First Language: The Early Stages*, Cambridge, Mass.: Harvard Univ. Press (1973).

Crandall, K. E., *A Study of the Production of Chers and Related Sign Language Aspects by Deaf Children between the Ages of Three and Seven Years*, Northwestern University: Unpub. Doctoral Dissertation (1974).

Robinson, H. M. et al., *We Read Pictures, We Read More Pictures, Before We Read*. Glenview, Illinois: Scott, Foresman and Co. (1965, 1965a 1965b).

Stokoe, William C., Jr., Casterline, D.C., and Croneberg, C. G., *A Dictionary of American Sign Language on Linguistic Principles*, Washington, D.C.: Gallaudet College Press (1965).

RHODE ISLAND LANGUAGE CURRICULUM: UNIT TEACHING STRATEGIES

Carol T. Godsave, M.A., Preschool Teacher, Bruce Godsave, Ed.D., Supervising Teacher, Rhode Island School for Deaf, Providence, R.I.

PART I: THE LANGUAGE CURRICULUM

The Rhode Island School for the Deaf Language Curriculum employs linguistic analysis in its program of language development. There are four categories of linguistic analysis: preanalysis, analysis, linear analysis and linguistic treeing.

Preanalysis skills are developed in preschool. Experiences are provided which directly involve the child. In second year preschool, these experiences are recorded in a 4 to 6 sentence experience story. The stories, which are written in the Five Basic Patterns follow a format of increasing complexity. Egocentric repetitive repeats the sentence throughout and incorporates a child's name for each sentence. Egocentric nonrepetitive uses children's names in different sentences. Nonegocentric sentences repeat the major portion of the sentence but changes the NP_1 or NP_2. Nonegocentric nonrepetitive style employs different sentences throughout. The latter allows vicarious experiences to be used with the children. As final preparation for analysis, samples of the five basic sentence patterns are chosen. The children are given opportunity to read these sentences without using picture clues.

Egocentric sentences are used in beginning analysis. Through questioning "who" and "what", NP_1 and NP_2 are found. The teacher labels the verb (V) until the children have had sufficient experience with analysis. Sentence patterns 1 and 2 are analysed first.

Analysis of sentence pattern 5 introduces the "when" and "where" question forms. Again, the teacher labels the linking verb (LV) until the children have had sufficient experience to do it themselves. Patterns 4 and 3 are analyzed last. At this time, the term NP, objective and adverb are substituted for who, what, where/when, which had formally been written over the appropriate parts of the sentence. The Five Basic Patterns are the following:

Pattern 1: $NP_1 + V_{Int.}$ (Adv.)
Pattern 2: $NP_1 + V + NP_2$ (Adv.)
Pattern 3: NP + LV + Adj. (Adv.)
Pattern 4: NP + LV + NP (Adv.)
Pattern 5: NP + LV + Adv.
NP = Noun Phrase, (Adv.) = optional adverb phrase.

Linear Analysis is used with most simple and a few complex transformations and means analysis that is completed on a line. Material to be analyzed is taken from an experience story or a cognitive chart. An example is the relative clause transformation: "A blacksmith is a man who shoes horses." The "who" is circles and an arrow is drawn to the word it modifies (man). The clause is placed in parenthesis and identified as an adjective clause. The sentence is then broken apart and analyzed: kernel sentence + relative clause. The sentence is put back together and labeled according to the completed analysis.

Linguistic treeing is a system used by transformational linguists when linear analysis becomes inefficient. It is a way of relating deep structure with surface structure. Trees are being introduced into portions of lower and middle school as a means of demonstrating clause relationships.

PART II: UNIT TEACHING

Teachers of hearing impaired children have been teaching units for years. This is most popular with the youngest children where one might find farm animals, or neighborhood helpers being presented. These ideas are used then in chart work which becomes a focus for language, speech, vocabulary and cognitive growth.

The idea of a unit is much different at the Rhode Island School for the Deaf. The basis of a unit is at higher cognitive level, one that can be spiraled throughout the years. The unit also consumes much of the school day, having the academic subjects integrated into it.

The most publicized and well known example of such a unit might be Man: A Course of Study developed by the Educational Development Center in Massachusetts.

To clarify what is meant by a unit, the distinction between "fact" and "concept" needs to be made. For our purposes, a fact is a isolated piece of information which is usually perceiveable. A concept is an abstraction of a group of facts. For example:

Facts:
people grow (elementary) ------------
animals grow (primary) --------------
people grow (elementary) ------------ } All living things grow.
cells reproduce and grow
(elementary ----------------------

All livings things grow.

The concept, "All living things grow.", is a concept that is taught at many levels. The facts used to teach the concept grow in complexity and sophistication as the child grows cognitively.

Take the concept, "Most people believe in a supreme being." This is a concept that will need many facts to support it. Where does support come from? It comes from studying the beliefs of many different peoples of the major religions of the world. It comes from the study of primitive people and their superstitions. It comes from mythology. It comes from numerology, and it comes from man's art. This concept takes years to build up, but given enough, varied, and constrastive information, the child will be able to use that concept in his work, although he may never articulate it as such.

The teacher is always using literature, the arts, and experiences to supply the facts to support the concept. In the early years the children are learning facts since they do not have the categories into which to sort these facts. As the information bank and the skills of the child increases, the generalization process becomes more important and necessary.

All things can not be taught in units at all times. Therefore, concurrently with teaching the unit, the teacher is working on math skills, reading skills, science skills, music skills (most children at RISD play two instruments by the time they leave middle school), social skills, etc. We have found that the unit is an excellent place to apply skills, to show a use for skills.

At our school we have also found that a unit usually runs from three to six weeks. In some cases a series of related units has run a half to a full year. Because of the specific needs of particular group of middle school children, they have gone through a year long unit: Cultures in Conflict. In this unit students looked at culture, various examples of contrastive cultures, and finally what happens when two cultures come together for various reasons.

A word of caution in preparing a unit on line: unit teaching requires a great deal of thought, preparation and organization on the part of the teacher. Often two to four teachers are working together. The teacher must be willing to invest the time in order to assure the unit's success. Our teachers do. We have trained others to do so as well. Without the effort, Unit Teaching will be just another fad in your classroom.

NOTE.—A copy of the unit outline was deleted due to space limitations.

A DEVELOPMENTAL INVESTIGATION OF SPEECHREADING SKILLS AS STIMULI IS VARIED

David W. Holmes, Ph. D., Director of Audiology and Speech Pathology, New York State School for the Deaf, Rome, N.Y.

Walter B. Green, Ph. D., Associate Professor, Department of Audiology, Ithaca College, Ithaca, N.Y.

One of the major considerations relative to the process of speechreading concerns the parameters of the message. A review of the literature revealed few investigations which have sought to examine speechreading skill with respect to varying kinds of stimuli. It is also interesting to note that data concerning the speechreading abilities

---

NOTE.—This investigation was fully supported under the 1974 Provost's Grant-In-Aid Research Program at Ithaca College, Ithaca, N.Y.

of deaf individuals, in particular, to different types of stimuli has not been reported. It would appear then that a need exists to investigate the speechreading skills of deaf individuals with varying stimulus materials.

The "Diagnostic Test of Speechreading" (Myklebust and Neyhus, 1970) is a measure which affords the examination of lipreading performance with respect to different types of stimuli. The test was standardized on a sample taken from residential and day programs in a metropolitan area. The test is available on film and contains practice materials. Raw scores, standard scores and percentile equivalents are recorded for word, phrase, sentence and phrase and sentence stimuli.

The purpose of the investigation was to examine the speechreading ability of deaf students of various ages as a function of the different stimulus material available on the "Diagnostic Test of Lipreading." Further, it was proposed that this investigation would provide additional data regarding the utilization of the test norms for the "Diagnostic Test of Speechreading."

EXPERIMENTAL DESIGN

Subjects.—The subjects were 194 deaf students enrolled for classes at the New York State School for the Deaf at Rome. The sample was divided into six groups based on age.

Procedure.—"The Diagnostic Test of Speechreading" was administered to each of the deaf subjects in accordance with the procedures described in the test norms.

Data analysis.—The data were analyzed in two phases. Initially, the intercorrelation matrix was computed between scores for the different stimuli and the total score. Later, a one-way analysis of variance (subjects x treatments) was computed across the scores for the various stimuli.

RESULTS

The analysis of variance was used to compare the performance of each of the six age groupings across word, phrase, sentence and phrase and sentence stimuli. All of the comparisons yielded F ratios which were significant beyond the .01 level of confidence. This indicated that in each of the six age groupings speechreading performance varied as a function of at least one of the different stimuli.

The intercorrelation matrix compiled for each group specified the degree of co-variation for each type of stimuli and the total score for each age group. That is, every variable was compared to every other variable and to the total speechreading score. For age groups I, II, IV, V and VI the lowest correlations were between word and phrase performance and highest correlation coefficients were between words and the total score. Group III was characterized by a low correlation between words and sentences and a high correlation between words and the total score.

The raw scores were then changed to standard scores and means and standard deviations for each of the stimulus categories were computed for each age group. For the category of words, the mean standard scores showed a gradual increase from the youngest to oldest age group. The greatest gains were made between the ages of 5½ years to approximately 10½ years. Beyond the age of 10½, the mean scores for words tended to become asymptotic. There was also a noticeable decrease in the standard deviations in the three oldest age groups. The standard deviations for the three youngest groups were greater than half the mean score implying a great deal of individual variability in these youngest children.

The descriptive data for phrases showed the lowest mean scores in the two youngest age groups with a substantial increase between groups II and III. From groups III through VI, scores tended to increase gradually as a function of age. This pattern was also evident for sentences. That is, the youngest group had the lowest mean score for sentences and there was a gradual increase in mean score to group II. The most rapid increase occurred between groups II and III with a more gradual increase from group III through V. The data for the phrase and sentence category were essentially comparable to the scores obtained for phrases and sentences individually.

The total score was obtained by adding the raw scores for words, phrases, sentences and phrases and sentences and computing a standard score. The means and standard deviations for this total score showed a gradual increase with age. The greatest increase, again, appeared between groups II and III and the standard deviations were largest for the three youngest age groups and smallest for the three oldest age groups.

Myklebust and Neyhus (1970) reported ratings of speechreading abilities as "excellent," "good," "fair" and "poor." The data from this investigation were compared to Myklebust and Neyhus' norms. The mean score for word stimuli from group I was 46.9 while the mean score for Myklebust and Neyhus' "fair" group was 62. A "good" speechreader, according to Myklebust and Neyhus, would obtain a score of 85.5. For the next oldest group, a mean score of 61.5 was obtained. Myklebust and Neyhus' rating of "fair" would be 77 and their "good" rating would be 89.2. Beyond this age, no comparisons could be made. However, the four oldest age groups in this investigation tended to generally level off in their mean scores for words and never equalled the mean scores for Myklebust and Neyhus' "good" speechreaders for the two youngest age groups.

Average standard scores were also computed for phrases and compared to the mean scores of Myklebust and Neyhus. The youngest group obtained a mean standard score for phrases of 35.5, while Myklebust and Neyhus' "fair" rating had a mean score of 45 and their "good" was 65. Group II yielded a mean score of 38.6 as compared to Myklebust and Neyhus' "fair" rating of 60 and "good" rating of 74. Groups III and IV yielded a mean score of 59, group V a mean score of 65 and the oldest group a mean score of 70. Means were also computed for sentences, phrases and sentences, and total scores and similar results were obtained. Again, the two youngest age groups were considerably below Myklebust and Neyhus' ratings of "fair" and "good."

DISCUSSION

This investigation attempted to analyze speechreading performance with respect to age as well as different types of stimuli. It was also proposed that speechreading data on such a large grouping of deaf students might provide what possibly could be considered "typical" performance on Myklebust and Neyhus' (1970) "Diagnostic Test of Speechreading."

There appear to be large discrepancies between the norms established by Myklebust and Neyhus and those found in what might be considered a "typical residential school for the deaf." For example, in the present study, it was found that for children up to approximately ten or eleven years old, there is a steady increase in their ability to speechread isolated words. Beyond eleven years, however, there is a levelling out of this ability. When this residential sample was compared to the norms reported by Myklebust and Neyhus up to the age of nine years, it was found that these students were below what Myklebust and Neyhus would term "fair" speechreaders. This raises two possible questions. First, are Myklebust and Neyhus' norms applicable to samples such as those that would be found in large residential schools? Second, how representative was the sample under investigation?

Regarding question one, the three youngest groups in this investigation were considerably more variable than those reported by Myklebust and Neyhus and appreciably below the norms reported by these authors for deaf children up to the age of nine years. It would seem then that not only is the performance of this residential group much below the test norms but there is also a great range of abilities concerning the speechreading of different materials. This discrepancy would perhaps preclude or invalidate the purported predictive value of this test for samples such as the one used in this study.

The above conclusions should be interpreted with respect to the fact that the present authors, at this time, have no concrete data to suggest that the subjects sampled are not representative of residential deaf students. Nor is there evidence that they are.

In all of these age groups, a decrease was found in the ability to speechread the same lexical items when they appeared within the framework of phrases and sentences. It would appear from these results that testing a hearing impaired child's ability to speechread isolated words has very little predictive value in assessing his overall ability to utilize speechreading as an avenue for communication. It is notable that in the "Diagnostic Test of Speechreading" approximately half of the test time is devoted to assessing the child's ability to speechread isolated words.

It can be concluded that the results of this investigation demonstrate a need for the refinement of measures utilized to assess speechreading skill in residential schools for the deaf.

REFERENCE

Myklebust, H. R. and Neyhus, A. I. *Diagnostic Test of Speechreading*, New York and London: Grune and Stratton, Inc., 1970.

THE GOVERNMENT AS CHANGE AGENT: THE FEDERAL PERSPECTIVE

Malcolm Norwood, Ph. D., Chief, Captioned Films and Telecommunications Branch, Bureau of Education for the Handicapped, Washington, D.C.

The theme of this panel, "Change Agents for Instructional Technology," and my topic, "The Government as a Change Agent," are bound to give you, the listener, and me, the writer, different perspectives. I shall be forced to act as the "Changor," and you will be the "Changee." That means I can not tell you, with any assurance, that the Federal Government has changed anybody or anything—even though I believe it has. It means I can only suggest to you ways in which the government has, and will, try to effect change. You must tell me if these changes have, or will, be effective. For despite many attempts by many authors to stereotype change as a process which results from aggression and occurs in spite of peoples' wills (Packard's "Hidden Persuader" Philosophy) the government has to be responsible to those that must change. It can be constrained by the limits set upon it by the tax payers. In a democracy radical change is possible only by majority consent.

Recognizing, then, that the Federal Government, to be effective as a change agent, must initiate change only with the consent and participation of the "changee," this paper must be treated as a series of propositions. Change, by the Federal Government, is a proposed strategy which will be more effective if accepted by the consumer, less effective if initiated with a neutral consumer, and impotent if offered to a resistant consumer. Since I represent a policy-making part of one Federal agency I will openly expose its propositions for change. That is the purpose of this paper. Let me reiterate, however, that I will expect no change in government to occur unless *you* accept and verify your belief in these strategies. As a representative of the government I recognize that my salary is paid by tax payers. I have been hired by you to assist you in providing greater services to handicapped children. If I tell you what I propose, you have a right to censor it or modify it—or approve it. If you do this, I will expect change, and be accountable for telling you how it occurred. If you resist my efforts, however, you will thwart change, and will be paying me for activities you consider worthless. I invite you, therefore, to monitor the strategies of change being proposed at this conference.

There are five cue words that describe a federal perception of a change agent role. These "cue" words—these change strategies—are: Catalyst, Facilitator, Financier, Regulator, Conscience.

A catalyst is defined in the new Random House dictionary as "that which causes activity between two or more persons or forces without itself being affected." The term "catalyst for change" therefore infers the Federal Government, in accepting a role as a catalyst agent, assumes that it may cause change to occur without itself being affected. This catalysis is precisely the reason for many of the demonstrations projects that the Government funds. These projects, like those funded under the exemplary education projects of Title III or the Early Childhood projects of the Handicapped Children Early Education Program, or the Learning Disabilities Program under Part G of Title VI are examples of demonstrations which are meant, by their existence, to stimulate local or State agencies to start changes in the direction of increased services to children. Many of these projects are both funded and monitored by a central federal agency so that the targeted "changee" for which these demonstrations are intended must be moved by the persuasiveness of the model or the service itself. The demonstration remains unchanged because of the central monitoring, and thus conforms to the aforementioned definition. Federal accountability to a catalytic strategy depends upon trying to track those programs which have started as a result of exposure to the demonstrations, decidedly a difficult task.

To facilitate means "to make easier or less difficult; help forward (in action, a process, etc.)." Because most educational systems, State or local, want to help more handicapped children than they are presently helping, the Federal Government has sought ways to make their plans and progress easier. Money, awarded in formula grants to states (Title VI-B, ESEA), is geared towards helping states activate their plans to serve additional handicapped children. Because helping handicapped children requires unique materials and methods, the Federal Government has facilitated future special education efforts by developing and disseminating valid curriculum methods and materials. In order to facilitate the process of communication between handicapped persons, the Federal Government has developed technological devices for communication between deaf persons and machines that help blind persons read ink print. The Congress has sought to facilitate educational opportunities for handicapped persons by new Federal legislation which will open up presently existing vocational/technical schools and institutions of higher education to them. Rehabilitation funds help handicapped persons receive adequate training. There is money to assist universities in training more teachers and other professionals to work with handicapped children. The accountability procedure for a strategy of facilitation is to look for increasing commitments of state and local funds for the education of handicapped persons.

The Federal Government is also a financial agent of the people. It attempts to be responsive to the people who pay its bills, providing educational services to states only when the responsibility for such educational services lies beyond the charge of that state's constitution (such as inter-state programs of education) or when a local or state agency finds the price of such education to be outside its potential. Hence, the Federal Government finds the rare occasion when it must, in effect, help to support educational systems. One such educational program supported in large measure by Federal funds is the program assisting deaf-blind children. Another such major thrust is in the area of services to multiple and severely handicapped children. Other examples are Gallaudet College and the National Technical Institute for the Deaf. Most other Federal funds are spent in financing needed instructional tools or programs which seemingly could not be funded by individual state or local education agencies in the immediate future. One such program with which you are familar and funded through the Bureau of Education for the Handicapped, supports a program to caption recreational and educational films for the deaf, supports the distribution of these films, supports a daily captioned national televised news program and supports projects to make captioned television a reality. An information system for consumers of special education is maintained by the Bureau of Education for the Handicapped, as are Inter-State Regional Resource Centers, Area Learning Resource Centers for Educational Media and Materials for the Handicapped. These projects which seem to be clearly service-oriented projects, are more facilitative than catalytic, more service-oriented than stimulative. They are projects which must be funded in order to complete the opportunities needed by handicapped children to survive and grow. As such they affect change in the field of education for the handicapped by providing better quality of services available to all teachers and parents of handicapped persons.

The regulatory function of the Federal Government is known—and feared—by all. In the field of education, however, the regulatory aspects are not so well known. Certainly, there are Federal regulations governing the racial mixtures of schools, but the regulation of instruction per se and the function of personnel within educational systems is unclear. In the field of special education, the regulation of the field tends toward the establishment of model projects and the awarding of funds in relationship to these models. Most Federal projects must write proposals which are measured against ideals and then maintained through the monitoring process. Money that flows through states flows with a few "strings" attached which require reporting with such detail and clarity that the quality of the projects may be known and maintained. The use of contracts to fund educational demonstrations, as in the Learning Disability program, has increased awareness of the products of education rather than with the processes of education. Thus, the Government, in clarifying its expectations in funding, really regulates the quality of program that it funds. This quality, which assures a useful product in the field, then becomes the baseline against which progress in services to handicapped persons may be measured. Accountability to the regulatory process then is established by obtaining feedback through the monitoring process. This is a gross process, and one which oftens yields frustratingly little information.

The final parameter of change by the Federal Government is that of conscience. In the struggle for the educational dollar, it is often the handicapped child who gets "short-changed" or even left out of the educational program. In the assumption of responsibility for educating handicapped persons, local and state educational agencies often mistake their role with that of the Federal Government. Often fads and unproven trends are utilized in the process of education by undisciplined educators. Sometimes biased evaluation is used to protect the errors, or even legitimate failure, of special education projects. The Government therefore must act as a conscience. It must make public statements, as Dr. Edwin W. Martin, Deputy Commissioner for Bureau of Education for the Handicapped, did recently, about the role that state and local educational agencies should assume regarding the total responsibility for the education of handicapped children. It must serve to promote excellence in educational services and discourage mediocrity. It must insist on accountability of all projects that it funds. It must test new materials, promote those that are valid, and decry those that offer false hope. It should offer assistance to state and Federal legislators who seek to promote appropriate and adequate educational and legislative opportunities for handicapped persons. It must help the courts in maintaining the rights and prerogatives of all handicapped persons. It must, in short, state and maintain an advocacy of equal educational opportunity for all children.

These are the ways—the strategies—that the Federal Government may use to attempt change in the educational system of our country, particularly that part of the system that deals with the lives and rights of the handicapped person. Federal legislators, by mandating the existence of a Bureau for Education of the Handicapped have charged the Bureau with the responsibility of being the focal point for changes. The Bureau of Education for the Handicapped, in turn, adopted the strategies we have just talked about.

If you will write to us we will be most happy to send you a copy of the rules and regulations which govern the programs administered by the Bureau of Education for the Handicapped. As you will note from the previous comments, the Bureau of Education for the Handicapped is engaged in a number of activities all of which can be classified as either catalytic, facilitative, fiscally supportive, regulatory, or directive. These comments, however, do not begin to tell the entire story of the Federal role as a change agent. The more abstract parameters of change such as dialogue with consumers, the decision making process, accountability measurement, national awareness, and the like would require more time then is presently available at this conference. However, the Bureau of Education for the Handicapped assumes a responsibility to recognize the need for change, predict the direction of change, and engage in continual communication with "the field" to find ways to serve more handicapped children with better quality programs.

It's success, however, depends upon you—the changee. Like a tango, change requires two. In our change model, however, it is unclear as to which party leads. The one thing that we do know in effecting change in special education, however, is that the music to our dance is supplied by handicapped children.

A CONCEPTUALIZATION OF INSTRUCTIONAL TECHNOLOGY AND THE EDUCATION OF THE DEAF

Barbara A. Bodner, Ph. D., Assistant Professor of Special Education & Instructional Technology, Syracuse University, Syracuse, N.Y.

PART I[1]

INSTRUCTIONAL TECHNOLOGY AT SYRACUSE UNIVERSITY

Accountability, individualized instruction, variable credit courses, flexible scheduling, mini-courses, demands for relevance: although the motivations and intents of each of these concepts may differ, they share a common element. The element is the design and implementation of alternative educational systems that can adequately meet the needs and desires of a variety of students, parents, and communities. There has always been a strong belief that not everyone learns the same way, at the same rate or shares the same interests. The problem has been to verify these beliefs and to design educational systems so that individuals can maximize their learning capacities.

---

[1] Part I of this paper is derived from information available in Update Fall, 1972. (Syracuse University, School of Education, Alumni Newsletter.)

Many kinds of people design educational systems. Teachers are constantly engaged in problems of design. Principals consider design from the perspective of an entire school and make priority choices regarding how scarce resources will be allocated among the many competing demands. It is difficult to expect the teacher or administrator to come up with well-reasoned, carefully-planned instructional alternatives for each student, or even for groups of students. The academic and research program in the Area of Instructional Technology at Syracuse University is studying how to design educational system, and is training people who will work with teachers and administrators in the design, implementation, and evaluation of specific alternative educational systems.

The study of alternative educational systems begins by systematically altering or combining those elements of the instructional system that can vary from situation to situation. Time is a dimension that can be utilized in an infinite variety of ways. One of the considerations, therefore, is the alternative use of this variable. The concept of mastery learning, for example, does not envision time as a variable used to discriminate among students. What counts is not how long it takes to learn something, but whether the something is learned.

A study of design alternatives should be more wholistic than fragmentary. For too long, we have sought to understand educational phenomena through dissection, by isolating a limited number of variables. Although such work cannot be discredited, it can be argued that it is equally important to identify all variables that are influential. AIT is committed to trying to understand these interacting variables, and to determine what guidelines can be developed for designing educational systems.

Designers of educational systems often focus primarily on the means whereby certain specified ends of education are to be achieved. This may be a critical mistake. It is important that those engaged in educational research consider, or influence others to consider, the extent to which instructional goals are accomplished, and the consequences of having achieved them. The designers must also pay serious attention to the goals, in order to determine their value.

EDUCATING THE DESIGNER

The Area of Instructional Technology offers graduate degrees to students interested in working in some facet of educational design, research, evaluation, or a combination of these. To help understand the skills and background which educational systems designers will possess, a general overview of our program follows.

Broad focus of the curriculum

AIT regards its curriculum as focusing on two major problems: the design of educational systems, and research in and evaluation of educational systems. In design, we seek to provide students with the skills and knowledge needed to design and implement various kinds of educational systems. Students will learn how to create and implement courses, programs, and projects, with full attention to the interrelationship of the multiple variables that are present. Students will develop the competency to consider goals, processes, materials, and how they are related. They will become skilled in working with people who want to initiate and implement instructional ideas, or who want to improve a course, or who want to offer alternatives to learners.

In research and evaluation, students will develop the skills needed to understand what happens when a certain program, or course, or material is utilized. They will learn how to describe and how to judge. They will know how to detect and measure perceptions, and how to determine discrepancies between what was intended and what occurred, including any unintended outcomes. Activities and understandings in research and evaluation will inform design and vice versa.

In an attempt to improve instruction, students will need to possess some common knowledge about the learner and the learning process. The learner is more than a cognitive mass of brain. The learner does his learning in a social context. He feels, he hopes, he fears. We need to take a multidimensional look at the individual. Also there is the recognition that there exist multiple theories of the process of learning and that the act of learning can and should be considered from a more philosophical perspective—a perspective that might be crudely characterized by the question why? Why does someone learn?

Functional specialities

The components of the overall problem of educational design form the basis for academic specialties offered through the graduate program in the Area. Students can decide to become more expert in design than in research or evaluation, or the reverse. Thus, functional specialties have been established within the departmental academic program.

(1) *Instructional developers.*—Students who pursue this specialty prepare themselves to work with courses or programs in a very wholistic sense. Although most people in this specialty work in course or departmental development in higher education, many work in school districts as curriculum coordinators. In either case, they work on the development of programs.

(2) *Applied learning researchers.*—Within the field of instructional technology, there is a need for a number of professionals with well developed competencies centered around research and theory focused on the structure, the dynamics and the development of human learning and memory. Such professionals would need to be well read in existing theories and the nature of theory construction, rigorously trained in research methodologies, and committed to the articulation of principles derived from research and theory and applied to the design of effective learning experiences and to the practical demands of education. It is particularly important that educational technologists step into this role of the theoretical-practitioner; neither the psychological researcher nor the teacher has developed the interest and competence to bridge the gap between research and practice.

(3) *Media specialists.*—These people are concerned with the use of alternative media in the teaching-learning process. They focus on instructional problems. They seek to help maximize the probability of appropriate utilization of media in the design of instruction. They are concerned with the technical consequences of media. Yet, they are first and foremost concerned with the strengths and weaknesses of a medium as a variable in a learning environment.

(4) *Educational evaluators.*—Like the researchers, the evaluators are not unique to educational technology. Evaluators seek to describe educational systems. They are skilled in measurement, in observation, and in the tactics of interviewing. They seek to know what happened, and they worry less about generalizability, than does the researcher.

PART II

INSTRUCTIONAL TECHNOLOGY AND THE EDUCATION OF THE DEAF

How can the field of educational technology have impact on educational systems designed to meet the needs of hearing impaired learners? What unique concerns of design and research or evaluation does this specific context present to the developer, the learning researcher, the media specialist and the evaluator? The remainder of this paper discusses some of the broader conceptions regarding educational design relative to the distinctive needs and demands of the hearing impaired population.

I believe there has been limited significant change in the lives of hearing impaired people, children and adults, that is attributable to modifications in the educational systems they encounter. For the most part, the educational system continues to provide similar learning goals for the majority of hearing impaired individuals and to establish similar means of achieving those goals regardless of functional level and individual interests. When working with groups labeled by our society: prisoners, the learning disabled, old people or the hearing impaired, there is the tendency to forget the infinite variety of individual characteristics, personalities, skills and needs of persons within the groups. The tools which allow educators to rationally prescribe instruction in an individualized approach are the accumulated evidence of research and evaluation studies integrated into classroom practice.

Educational system design relies on feedback from the field. What is happening in a program and for whom is it happening are crucial questions in any ongoing instructional development effort. Newly established programs within a school, such as a closed circuit ITV system, need to be observed and participants, both students and teachers need to be interviewed. Innovative mainstreaming programs require careful scrutiny for the unanticipated outcomes as well as for the planned-for results. "Who is playing with whom at recess," and "what are the characteristics of those teachers who work together and those who do not." The list is endless. This type of "treatment" evaluation provides everbearing fruit in terms of the useful information brought forth.

Measuring student academic achievement has been a type of evaluation so abused and misunderstood by education generally that in many instances it has lost whatever meaning it once had. School use of norm-referenced measures to order students in a class or school according to general ability are, in effect requiring students to possess characteristics of academic intelligence necessary to make good grades in their schools. Since the schools have developed a systematic approach for interacting with students, in the event some students come without these assets, they are portrayed as deficient and dealt with in ways which, again, may deny the opportunity to achieve.

The danger of norm-referenced tests to students is the consequential action taken on their scores. Norm-referenced achievement tests tell that one student is more or less proficient than another, but do not tell how proficient either is with respect to the subject matter tasks involved. Concern with educational system design forces us toward the kind of information made available by the use of criterion-referenced measures. Criterion referenced measures provide information regarding the degree of competence attained by an individual on a particular task along a continuum of achievement ranging from no proficiency at all to perfect performance. The standard against which a student's performance is compared when measured in this manner is the behavior which defines each point along the achievement continuum. The point is that the specific behavior implied at each level of proficiency can be identified and used to describe the specific tasks a student must be capable of performing before he achieves one of these knowledge levels.

To what degree is the designer of educational systems a catalyst in the process of dissolving traditions, which tend to bind our thinking, in favor of innovating new attitudes and broader conceptions, which tend to move us beyond the well-trod territory? Is this a process when knowledge of the political, social and economic influences is critical for successful design? The massive developmental efforts in math and science, for example, responded to the launching of Sputnik. Today, the press of the educational designer for alternative educational systems responding to the needs and desires of the community forces a look at the growing trend away from the image of a 7–16 year old schooling time toward a philosophy of life-long learning. The educational program geared to meet the demands implied by this philosophy does not exist; indeed, an awareness of this need is only just emerging. At the same time, there are the constraining traditional views held by the hearing impaired themselves. Hearing impaired youth and adults continue to hold stereotype views regarding continuing education and usually stop attending any formal educational after they are in a job. To what extent are our community colleges really community oriented?

If, as they say, the past is prologue, what of tomorrow? A brief look at some beginnings may help us predict. Recently there has emerged a recognition and a respect for including a total communication approach in classroom teaching. Previously, students unable to benefit from the communication method used in their settings, were functionally deprived an education. Research and evaluation of so-called manual and oral groups of hearing impaired children have facilitated this change. Similarly, there is an increasing number of alternative educational programs being offered to school-age hearing impaired children. Local public school programs, integrating and mainstreaming hearing impaired students to various degrees, are developing both in response to an overall concern for equal access to educational opportunity and to a growing demand for nonsegregated settings.

Research tells us that the so-called new media (e.g., CAI and ITV) and technology have not made a significant difference in the learning of school children. It has been proposed that the new technology, the new teaching methodologies relying on individualized instruction, flexibility in scheduling and people, and relevancy are in conflict with the traditional educational systems in our schools and as such as we have very limited knowledge in spite of the years of research regarding what the new media can accomplish. Have we taken advantage of the media's unique potential and characteristics: "Sesame Street" may be our one shining example.

A final word regarding a factor which greatly influences teachers, administrators, and educational designers working together. Each person brings with him/her to the planning table an ideology, a doctrine or way of thinking, relative to the education of the deaf; that ideology may range from strong beliefs toward the mainstreaming of hearing impaired children to the communication methodology used in the classroom. The consequences of our composite ideologies as they become translated into the classroom sphere may befall hearing impaired students in a way quite unlike our expectations. What may signify a furthering of our beliefs to us, may, in translation, become so processed that the true flavor of the plurality and dynamism put forth back at the planning table is lost. The problem is complex: how do we come to grips with multi-ideologies while preserving their substance?

THE MEDIA DIRECTOR IN AN EMERGING ERA

Kerry A. Johnson, Coordinator of Instructional Television and Instructional Development, the New York State School for the Deaf, Rome, N.Y.

Excitement over the hope and promise of instructional media has been a prominent characteristic of education for the deaf for over a decade. Great investments by schools in sophisticated hardware systems, trained personnel and teacher training programs give concrete evidence and support to this excitement. Pay-off from the technology has not met with equivalent excitement, however, and, in some circles, there is talk of the complete failure of instructional media to live up to its advanced billing.

Occasional rethinking and reassessing of the use and misuse of technology is a healthy activity for us to undertake both as a way of rekindling some of the excitement with media and in analyzing what needs to be done in order to overcome the failures of media use in the schools.

Early infatuation with the healing power of media in our schools gave rise to huge investments in hardware which, more often than not, represented the ultimate in both production and delivery systems. Once installed these facilities had to be used and maintained. Forced use sometimes led to add-on educational programs, ill considered purchase of inappropriate software or programs that were designed but never implemented. The simpler equipment, such as the overhead projector, overcame much of its early difficulty in gaining acceptance, because, with the exception of burned out bulbs it is easy to keep in working condition and its uses are somewhat obvious. Also, the overhead could more readily be used as a tool, to meet some pre-determined need, or serve some pre-determined objective, because it was at hand and it was always under the control of the user. In contrast, the care and use of a closed circuit television facility, with production capability, demands an experienced, qualified and expensive staff and a reasonable operating budget. Schools seem to have a great deal of difficulty meeting those types of needs.

I believe we are moving into a new era of media use and I would like to share with you some of my thoughts and projections as to the nature of that era. Much of the idealism of the past decade is still in place but the scope is broader, the focus more people-oriented, and the tasks more manageable. The perspective for the future needs to consider more the sense of media as communication tools and allow the applications of media to be dictated by the nature of the communication and not the existence of the tool. The perspective also needs to include the concept that people are on either end of a communications model and, therefore, that the nature of those people is as important as the nature of the message.

The broader scope of media utilization in the schools involves, I think, a greater articulation between the school and the community. The school is one community agency that should serve all of the members of that community regardless of individual differences. Inherent in that concept is the notion of life-long education and the individual's need for continual personal growth.

The responsibility for establishing and maintaining a philosophy of continuing education in a given school does not, of course, rest with the media director. It is a school policy decision that is often complicated by state mandates, as in the case of most state residential schools. Funds and personnel for any extensive program would be difficult to find and resistance to the idea from school administrators and state legislators would probably be substantial.

A philosophy of continuing education need not be eliminated because full-scale programs are financially unfeasible and it is in this regard that the media director can be an important agent of change. School-community interaction is a benefit to both the school students and the citizens of the community. Consider the following activity: as a media director, and instructional developer, you are working with a junior high teacher on a bicentennial unit in local history. One possible approach to this unit is to allow a maximum responsibility for researching the content area to lie with the students. In almost all of our communities there are local historical societies, persons with special interest in the history of the revolution, elderly persons with memories and memorobilia of the "old days", craftsmen who use, or know about early American craft techniques, local bicentennial committees, local points of historical interest and a multitude of other fascinating people and placse that can provide great quantities of raw data. Through careful planning between instructional developer and teacher, mini production teams can be established each consisting of teacher aids, students and resource people from the community. The students can direct and videotape segments of a television series which features the resource persons. Shooting can be done on location with video porta paks and editing of the tape can be done in the porta pak itself. The various segments can be assembled into a final series of programs which can be shown to the school population and also to various groups in the community. If some productions are outstanding arrangements can be made to air the shows on local cable television channels.

What are the limitations of such plans? The major one is time. It takes a great deal of time to plan and execute the kind of activity outlined above, and time is something school personnel seem to have in precious short supply. Teachers are often reticent about involving themselves in a project that appears to take them away from the rigors of the written curricula. A partial solution to the time problem exists through the innovative use of personnel.

Why videotape in this instance? It provides a more permanent record of the experiences, it facilitates feedback, and it enriches the experiences of the producers by giving them the responsibility of assuring effective communication through creative use of the medium of television. It makes learning active and real for the student and for the resource person, it most likely provides a unique opportunity to work with deaf children. As a collaborative effort the production can benefit many other children in the school and community as well as the production crew. In short, it provides an opportunity for the students and the resource persons to share in each other's world.

What about captions or interpreters? Expensive captioning devises, or special effects generators which allow for split screen techniques, are perhaps sufficient but not always necessary. Simply including an interpreter in the scene, as it is shot, can answer the communication problem and often carry a more pleasant, natural and effective message. The kind of production set-up envisioned for a situation such as the example, is a single camera porta pak. Simple shot selection, careful planning beforehand and the ability to stop and reshoot with only a minimal picture distortion allows for in-camera assembling of large segments or complete shows. Instant feedback capabilities of videotape also provide evaluation potential, on location, for the monitoring of technical quality. A tendency to expect professional or commercial television quality from small studio equipment should be avoided at all costs and the more effectively the audience can be taught to expect good, but not great quality, the better.

Where does the "continuing education" part come in? There are several ways to consider such projects as "continuing education". Difficulty sometimes occurs, however, because of the tendency on the part of people in our society to equate education with schooling and to expect some form of credit for learning experiences besides the rewards in the learning itself. Perhaps some compensation for the learning experience in this example, can be in the form of a school certificate of participation. In any event, the adults serving as resource persons on production teams stand to learn a great deal about television techniques, communication needs of deaf people, the activities of other community agencies, and about their own disciplines.

Adults in the community, and especially deaf adults, can be encouraged to view the productions. Special classes with additional activities, such as reading and discussion groups, can be conducted to broaden the impact of student productions. Most importantly the students engaged in the activity can be shown that education can be an on-going, life-long process and need not be terminated by some arbitrary regulation or achievement such as graduation.

School-community interaction, and the broadened scope of the school offer one example of the expanded role of media persons. Many other equally obvious and exciting possibilities exist outside of the narrow limits of the school. Participation on instructional services committees of local television stations, for example, provides an opportunity for educators of the deaf to influence local television programming. Exchange activities with other schools in the area can provide opportunities for work and creative experience which increase the contact of our students with other kinds of children in the community. Weekly news round-ups by student news teams can include interviews with town officials, interesting local people, business and civic leaders, deaf adults in the community, and students from other schools. The news round-ups can also be exchanged with other schools for the deaf and other schools in the community. Exchanges with other local schools might encourage hearing students to learn more about deaf children and perhaps, to learn manual communication skills.

Examples of successful television enterprises with children are well documented and many, if not all, of the schools for the deaf have some form of production experience. At our school we produce a regular weekly news program that includes many different nonnewsy items. In reality, it is simply a vehicle for the creative expression of any of our students who have something to say. As such, it has included items ranging from aerial trips over the school to poetry recitations by lower school children. The effort in our production is to have a varied show that will interest all segments of our school population from the youngest child to the oldest, and will provide a chance to see what some of the other classes in the school are doing. Response to the show is tremendous and voluntary support in the form of "fresh talent" seems always in ready supply. Spontaneous and public use of language and speech has been an obvious and rewarding aspect of our endeavor.

In other areas within the school the media staff can also do much to stimulate a broadened view of learning. Public television, for example, provides much in the way of interesting and useful materials that do not need elaborate reworking in order to be appropriate for deaf students. The major need for successful use of television programming is to know in advance what will be on and to have the option of repeating it at some future time for review. One way to encourage the use of public television is through the publication of a weekly television newsletter which outlines the shows that would be of interest to the teachers. PBS stations generally publish complete program guides which outline the entire year's programming in some detail including descriptions and statements of objectives. Summaries of weekly entries in a T.V. newsletter provide ready reference for teachers and are more manageable and accessible than the complete guides. Also, although copying on-air programming is not legally proper at this time, instructional services personnel at local stations recognize that it goes on. In some cases, they encourage it, as long as it increases the use of their services.

The ideas for innovative use of technology in schools are almost limitless. Emphasis on the acquisition of hardware is diminishing, and the time has come for realistic planning of appropriate expanded, active learning experiences for all of our students. Increased articulation between the school and community is essential to the improvement of educational opportunity and the establishment of an attitude of life-long learning. Greater utilization of existing materials, services and people, such as those offered by public television facilities, can broaden the scope of schools. And impact on the quality and extent of community services can be achieved by the schools and, in part at least, through the effort of the media persons.

Limits to growth of innovative programs and the implementation of new concepts occur as a result of misuse of staff time and money in support of activities that offer marginal return over the long-run. Administrative requests of media people to provide services such as taking pictures of school activities, running projectors or fixing equipment, take valuable time and energy that needs to be used in other more productive areas such as in-service training and development activities with teachers and teaching activities with students. Incentives from administrators to develop more competent staff and student use of media services can take many forms including assistance in seeking grant money for special projects, the assignment of competent ancillary personnel to the media department, creative use of the talents of the media staff, attention to the opinions of the media director and teachers in the use of media department funds and the purchase of mediated materials, and a willingness to use general school funds to deal with fiscal emergencies so that vital programs need not be eliminated. Without complete administrative support of media department activities, follow-through on the often huge financial commitment in materials and equipment is not possible. The equipment will lie in dusty disuse and critics will say, "See, I told you that media business wouldn't work!"

A STUDY OF LEARNING IN DEAF CHILDREN

Pamela Carson, M.A., Florida School for the Deaf and Blind,
St. Augustine, Fla.

Cornelius P. Goetzinger, Ph. D., University of Kansas Medical Center,
Kansas City, Kans.

INTRODUCTION

The study involved comparisons among auditory, visual and auditory-visual presentations of material to be learned by deaf children. It was designed to explore questions pertaining to whether or not combined audiovisual methods of presenting material for learning are superior either to auditory or visual presentations alone.

The problem is associated primarily with the processing abilities of the human organism and concerns the issue of the extent to which bisensory stimulation (auditory and visual) may or may not be more efficient for learning than either an auditory or visual input. Some theorists (Broadbent, 1956; Davis, 1959; Adams, 1962) adhere to the concept that all incoming signals, regardless of modality, arrive at a common central area for processing, and that this area can handle only one signal at a time. Hence, signals arriving simultaneously from two different sense organs cannot be processed together. The information in one channel must be ignored or delayed until the processing mechanism is cleared. The inference from this viewpoint is that man cannot respond to a bimodal stimulus presentation in other than a unimodal manner.

Proponents of a unisensory approach for training communication skills in deaf children maintain that individuals do not function by integrating simultaneous stimuli. Rather, the impaired auditory system becomes even less functional with the result that the visual system (in bimodal stimulation) takes pre-eminence, and lipreading assumes the major remedial role in learning (Stewart, Pollack and Downs, 1964).

However, there is general acceptance that there exists interaction between data received through the various modalities. Neuroanatomically, the sensory areas of the brain are interconnected and there are subcortical interconnections. Ettlinger (1967) suggests that the processing of sensory information may occur at two levels and involve two mechanisms. Proponents of a bisensory approach for training the hearing impaired agree with him.

Recently, the concept of so-called "Total Communication" has been proposed as a method for teaching deaf children. The approach involves essentially the use of lipreading, auditory amplification and signs and/or finger spelling simultaneously. Hence, T.C. utilizes not only bimodal but also, BIVISUAL stimuli (T.C. also includes gestures, reading, writing.) In our view the organism cannot process two visual inputs simultaneously. Therefore, a study was designed to compare seven different conditions of auditory and visual inputs relative to the learning of nonsense syllables by deaf children. They were as follows: (1) Lipreading; (2) Signs; (3) Auditory; (4) L.R. and Aud.; (5) L.R. and S.; (6) S. and Aud.; (7) L.R., S. and Aud., or T.C.

SUBJECTS AND DESIGN

Thirty-five subjects at the Kansas School for the Deaf, ages 8–10 years with I.Q.'s within the range 85–115, were assigned randomly (for the most part) to the learning conditions forming seven groups of five subjects in each. Each group participated in a test session consisting of 10 trials. A trial consisted of the presentation of each of the six nonsense syllables (WUB, WOJ, JID, KEZ, DAQ, ZEG). Six nonsense signs were paired with the nonsense syllables for use in the Sign conditions.

A female teacher was video-taped speaking and signing each nonsense syllable. The six video-taped presentations were randomized ten times to accommodate the ten trials. Statistical analyses were based upon 300 responses for each group, and consisted of comparisons of differences among groups using the "t" test.

PROCEDURE

The closed circuit TV system and studio at K.S.D. was used for the experiment. One group of five subjects were tested per session. They sat at desks in an arch at a distance of six feet from a TV screen positioned at eye level. For auditory presentations the subjects wore headsets and received appropriate amplification. To eliminate signs or lipreading when required by a condition, masks (black cardboard cut-outs) were appropriately placed on the TV screen. Sound was eliminated with the volume control. Following a practice period the experimental session was begun which included the TV presentation, the responses and syllable identification (flashing of the correct syllable on the TV screen) after the subjects had turned the page of their response sheet booklets to a new page. A booklet consisted of 60 response sheets, each of which contained the six nonsense syllables printed in individual boxes and radomized for the 60 presentations.

RESULTS

Table 1 (slide 1) shows the means, standard deviations, and standard errors of the means of the correct responses over the ten trials for the seven learning conditions. As may be observed, the mean of the correct responses for the lipreading and auditory condition was highest (30.20) followed by lipreading and signs, and lipreading, signs and auditory (26.20 each), lipreading alone (20.80), signs alone (17.00), auditory alone (12.60), and signs and auditory (10.60). The standard deviations and standard errors of the means of lipreading alone, of lipreading and signs, and of lipreading, signs and the auditory (total communication) are larger than for signs alone, auditory alone, and lipreading and auditory, and signs and auditory. Apparently, the lipreading alone condition is characterized by a large variance (the square of the S.D.), and in addition, it appears to increase the size of the variance in every condition in which it is included with the exception of the auditory (lipreading and the auditory condition). In the latter instance, the combination of L.R. with the auditory appears to increase performance as shown by the mean of 30.20, and to reduce the variance as indicated by the decrease in the S.D. to 5.89. Surprisingly, the L.R. and signs condition, or the one in which there is exposure to two different visual stimuli concurrently, resulted in a mean which ranked second in magnitude to the lip-reading and the auditory condition. As the signs alone condition resulted in a lower mean (17.00) a smaller S.D. (5.78), it would appear that the addition of lipreading increased the size of both (M=26.2 and S.D.=15.35).

To determine if any of the differences among the seven learning conditions was statistically significant, tests were computed for the 21 comparisons which were possible. The results are reported in Table 2 (slide 2).

As shown in the table (slide), the mean of the correct responses of the lipreading and auditory condition was superior to signs alone, the auditory alone and the signs and auditory conditions at the .01 alpha level for a two tailed test. The L.R., signs and auditory condition (T.C.) was superior to the auditory alone and the signs and auditory conditions at the .05 alpha level. No other conditions were statistically different. The fact that the difference between the lipreading and auditory, and the lipreading, auditory and signs (T.C.) conditions was not significant, indicates that the latter is not any more effective than the former with reference to the total number of correct responses.

Next, learning curves were constructed to examine the various conditions as a function of trials. There was a trend indicating a gradual increase in performance as a function of the number of trials for the auditory alone, the lipreading and auditory, and the lipreading, signs and auditory conditions. However, none was pronounced.

DISCUSSION

Previously, we mentioned the large standard deviations associated with the L.R. alone, the L.R. and signs, and the L.R., signs and Auditory conditions. Inspection of the learning curves revealed the reason as due to substantial fluctuation in the mean number of correct responses from trial to trial as compared to those conditions in which the S.D.'s were small. Clearly, every condition which involved lipreading, with the exception of L.R. and the auditory, was characterized by wide variability. In L.R. and the auditory condition the S.D. was reduced. Interestingly, although the mean difference between L.R. alone and the L.R. and auditory condition was not significant because of the large S.D. of lipreading alone, it is obvious that there was a trend for higher scores and less variability when the auditory was combined with lipreading. This trend suggests that the auditory combined with lipreading enhances cues for understanding.

As observed in the tables the L.R. and signs conditions (simultaneous visual stimuli) did not differ statistically from the L.R., signs and auditory, a finding suggesting that the L.R., signs and auditory group concentrated on L.R. and signs to the exclusion of the auditory rather than on L.R. and the auditory to the exclusion of signs. In short, had the latter obtained, the S.D. would have been expected to decrease in size. Furthermore, the signs and auditory condition was not used by these subjects as this modality is poor for learning ($M=10.20$ and $S.D.=3.70$).

The results of this study suggest that the simultaneous use of hearing, lipreading and signs may not be any more effective for teaching deaf children than the combination of lipreading and hearing, the latter as provided by amplification. In addition, adding lipreading as a second visual input in the "total communication" model introduces greater variability into performance.

The sign language although generally considered to be easier to see than lip movements, and therefore, a more accurate method for communication among the deaf, nevertheless, was not found to be superior. Obviously, a great deal of research is need to get answers concerning the most effective methods relative to learning in deaf children.

SUMMARY

The purpose of the study was to compare the learning of nonsense syllables by deaf children under seven experimental conditions involving unisensory and bisensory stimulation. The conditions were as follows: L.R. alone; signs alone; auditory alone; L.R. and Auditory; L.R. and Signs; Signs and Auditory, and L.R.; Signs, and Auditory. The results were: L.R. and Auditory were statistically superior to Signs alone, Auditory alone, and the Signs and Auditory conditions. The L.R., Signs and Auditory condition was superior to the Auditory alone, and to the Signs and Auditory conditions. No other differences among conditions were significant. Since the L.R., Signs and Auditory condition was not different from the L.R. and Auditory condition, the results appears to cast doubt upon the superiority of "total communication" over an aural-lipreading approach in teaching deaf children.

REFERENCES

Adams, J. A. Test of the hypothesis of psychological refractory period. J. Experimental Psychology, 1962, 64, 280–287.

Broadbent, D. E. Successive responses to simultaneous stimuli. Quart. J. Experimental Psychology, 1956, 8, 145–152.

Davis, R. The role of "attention" in the psychological refractory period. Quart. J. Experimental Psychology, 1959, 11, 211–220.

Ettlinger, G. Analysis of cross-modal effects and their relationship to language. In F. L. Darley (Ed.), Brain Mechanism Underlying Speech and Language. New York : Grune & Stratton, Inc., 1967, 53–60.

Gaeth, J. H. Verbal and nonverbal learning in children including those with hearing losses. Final Report, Project #1001, The Office of Education, U.S. Department of Health, Education, and Welfare, 1963.

———. Verbal and nonverbal learning in children including those with hearing losses, Part II. Final Report, Project #2007, The Office of Education, U.S. Department of Health, Education, and Welfare, 1966.

———. Learning with visual and audio-visual presentations. In F. McConnell and P. H. Ward (Eds.), Deafness in Childhood. Nashville, Tenn.: Vanderbilt University Press, 1967, 279–303.

Gates, R. R. The differential effectiveness of various modes of presenting verbal information to deaf students through modified television formats. Unpublished doctoral dissertation, University of Pittsburgh, 1970.

Glaze, J. A. The association value of nonsense syllables. J. Genetic Psychology, 1928, 35, 255–269.

Goetzinger, C. P. Psychological considerations of hard of hearing children. In R. L. Cozad (Ed.), The Speech Clinician and the Hearing Impaired Child. Springfield, Ill. : Charles C. Thomas, Publisher, 1974, 52–69.

———. Children with Hearing Impairment. Submitted for publication, 1974a.

Hudgins, C., and Numbers, M. Speech perception in present day education for deaf children. Volta Review, 1948, 50, 449–456.

Katz, L., Mathis, S. L., and Merrill, E. C. The Deaf Child in the Public Schools : A Handbook for Parents of Deaf Children. Danville, Ill. : The Interstate Printers and Publishers, Inc., 1974.

Kent, N. S. Total communication at Maryland School for the Deaf. The Maryland Bulletin, 1971, 91, 69–86.

Klopping, H. Language understanding of deaf students under three auditory-visual stimulus conditions. American Annals of the Deaf, 1972, 117, 389–396.

Moores, D., Weiss, K., and Goodwin, M. Receptive abilities of deaf children across five modes of communication. Exceptional Children, 1973, 44, 22–28.

O'Neill, J. Contributions of the visual components of oral symbols to speech comprehension. Journal of Speech and Hearing Disorders, 1954, 19, 429–439.

Oyer, H. and O'Neill, J. Visual Communications for the Hard of Hearing. Englewood Cliffs, N.J. : Prentice-Hall, 1961.

Pollack, D. Educational Audiology for the Limited Hearing Infant. Springfield, Ill. : Charles C. Thomas, Publisher, 1970.

Prall, J. Lipreading and hearing aids combine for better comprehension. Volta Review, 1957, 59, 64–65.

Sanders, D. A., Aural Rehabilitation. Englewood Cliffs, N.J. : Prentice-Hall, 1971.

Stewart, J. L., Pollack, D., and Down, M. P. A unisensory program for the limited hearing child. ASHA, 1964, 6, 151–154.

TABLE 1.—MEANS, STANDARD DEVIATIONS AND STANDARD ERRORS OF THE MEANS OF CORRECT RESPONSES OVER 10 TRIALS OF DEAF CHILDREN UNDER 7 CONDITIONS OF LEARNING

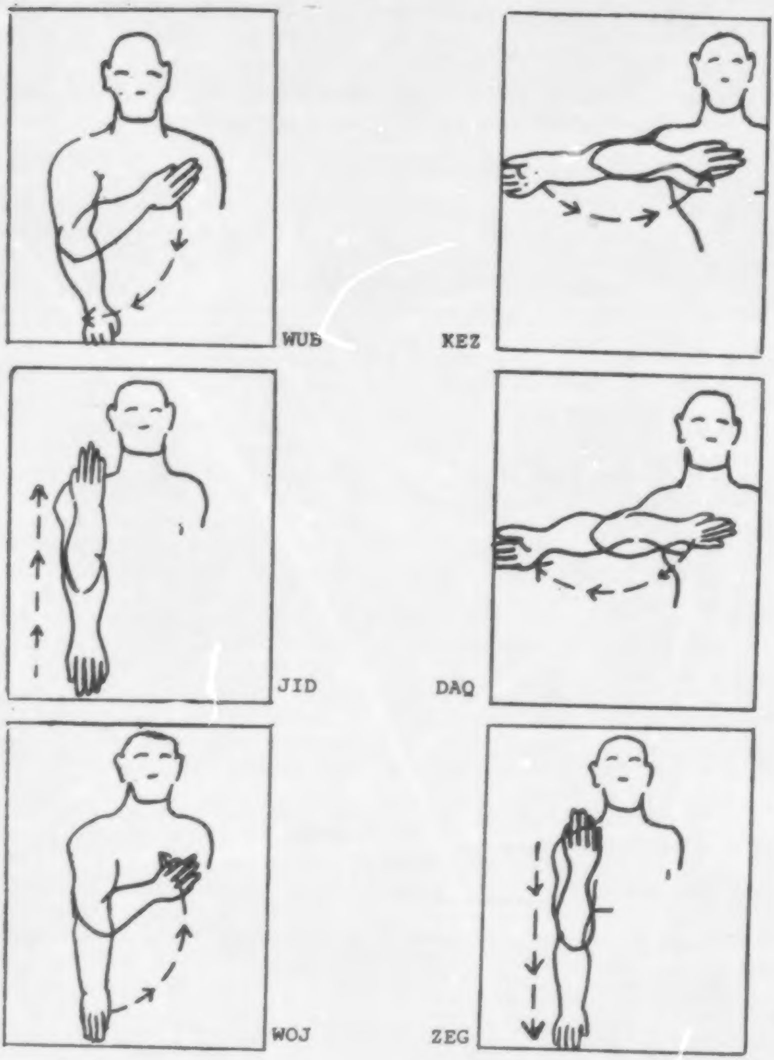
[N=5 in each group]

Learning conditions	Means	Standard deviations	Standard errors
Lipreading alone	20.80	13.10	5.87
Signs alone	17.00	5.78	2.59
Auditory alone	12.60	3.84	1.72
Lipreading and auditory	30.20	5.89	2.64
Lipreading and signs	26.20	15.35	6.88
Signs and auditory	10.20	3.70	1.65
Lipreading, signs, and auditory	26.20	11.94	5.35

TABLE 1.—T TEST RESULTS FOR 21 COMPARISONS AMONG THE 7 CONDITIONS OF LEARNING

	Signs alone	Auditory alone	Lipreading and auditory	Lipreading and signs	Signs and auditory	Lipreading signs and auditory
Lipreading alone	0.59	1.24	1.46	0.59	1.74	0.68
Signs alone		1.41	[1] 3.58	1.25	2.22	1.55
Auditory alone			[1] 5.60	1.92	1.00	[2] 2.42
Lipreading and auditory				.54	[1] 6.45	67
Lipreading and signs					2.26	.01
Signs and auditory						[2] 2.86

[1] Equals 0.01 (3.355).
[2] Equals 0.05 (2.306).



WUB

KEZ

JID

DAQ

WOJ

ZEG

Fig. 1. Syllables and signs used for testing

EVOLVEMENT OF OPEN CLASSROOM AT THE LEARNING CENTER

Warren A. Schwab, Director, Learning Center for Deaf Children,
Framingham Learning Center, Framingham, Mass.

A. HISTORICAL BACKGROUND

Initially, The Learning Center was begun for a number of reasons:

1. Some of us felt there was a need for an alternative approach to educating the deaf.

2. We felt the need for more parent involvement in the school itself and a more honest, realistic approach with the parents.

3. We felt that kids should have the opportunity to learn by every avenue possible, thus we adopted total communication. It was also decided that because of prevailing philosophy of oralism in Massachusetts, we would start the school there and hopefully, have total communication accepted throughout the state. This phase has been very successful with three other schools now using total communication.

4. Staff is the most important ingredient to a successful program as they should help formulate policies, salaries, curriculum, and philosophy. As the children grow older and are more capable of making responsible decisions, they will play a more vital role in this area.

Thus, The Learning Center was founded in July, 1970, and began in rented quarters of a parochial school with 19 children, 3 teachers, 1 secretary, a curriculum consultant and myself as director. The end of the year we had grown to 29 children, 4 teachers, 3 aids, secretary, curriculum consultant and myself. The second year saw a growth to 47 children, 7 teachers, 4 aides, 1 consultant, 2 secretaries and myself.

The third year saw us move to new quarters, an administration building, a barn partially converted to classrooms, and a third building not utilized at that time, with enrollment and staff staying approximately the same.

The fourth year saw us utilizing the third building by adding an audiological suite with a full time audiologist and a preschool with two full time teachers and teacher aide. Enrollment had grown to 69, 25 full time staff including an audiologist, a media specialist, and a full time custodian.

The fifth year saw a full time social worker added and a junior high industrial arts program initiated. This program offers woodworking, metal working, photography, ceramics, basic home repairs and career studies.

Funding was provided by the Commonwealth for operating costs only. The purchase of the property, all renovations and equipment purchased were done by various fund raising efforts. Title I funds provided for the audiological room and equipment as well as the industrial arts equipment.

It is important to give you this brief overview of our growth in order for you to see how we evolved into open classroom. Although we had some ideas of how education of the deaf should be different, it was during that first year we really began the change.

Doors were never closed and as children passed another room and saw something interesting happening, they would just "pop in" and participate. This, of course, created mixed feelings among staff and children and from that grew our practice of having at least yearly seminars to discuss philosophical questions and half days on Wednesday to give ample planning time.

B. SEMINARS

Seminar time is built into the school calendar to assure that we leave ourselves ample planning and discussion time. One of the first seminars was regarding philosophy of The Learning Center.

1. *Philosophy.*—A framework of reference was needed to guide us and future staff members towards our goals of a child-centered school. A complete statement of our philosophy is available, but in brief we believe that children can and will learn better when they are in an exciting, stimulating environment where learning is fun and creativity is the rule. All members of The Learning Center are equally respected as individuals having their own strengths and weaknesses.

Rather than having one set curriculum that all children must follow, individual programs for each child are worked out by the child with the help and guidance of the teacher.

The teacher's role is not at all like the traditional one. The teacher is a helper with an extra hand when needed, a person who asks the child thought provoking questions or tosses a child's question back to him with "what do you think?"

The child's role is to accept major responsibility for planning their own education, both what they learn and when they learn it, as it coincides with the reality of their world. Accordingly, they must accept the responsibility that this involves and participate cooperatively with other members of The Learning Center.

2. *Workshops.*—Half way through our first year at our new quarters, we realized the open classroom concept was not working. The kids were literally running wild. As we still believed strongly in the concept, consultants were called in to aid us in resolving this difficulty. One of them felt space design was causing a major portion of the problem. Therefore, we held a three day workshop with the aid of a space design consultant.

We started off defining five categories of ways of understanding space: movement, vision, touch, smell, and sound. Two brainstorming sessions were held to define what these five categories meant and then moved to the process of constructing an environment.

Scavengeable items were gathered together then utilized to create an environment. From there the staff went to pathways and traffic flow, size, shape, height, kinds of movement, orientation, designing a reading area and finally designing the entire area.

Present Operation of the Lower School

1. PHYSICAL DESIGN

At the present time the 40 x 80 room is divided into five major space areas and two minor space areas. The major areas are Art, Revolutionary War, Discovery (which is Math oriented), Quiet (Reading and Language) and Lab (Science). The two lesser areas are listening (Auditory Work) and high gear (to work off steam).

2. CHILDREN

There are currently 32 children from approximately age 6 to 12 with varying degrees of auditory loss and intellectual capabilities. We at the present time do not accept severely retarded, emotionally disturbed or autistic children. Placement in the lower school is not done by chronological age alone, but we also consider social maturity and academic potential or level.

3. DESCRIPTION OF AREAS

The Science Lab offered several units of study that were selected and set up for the children to experiment, observe, make predictions, and to make conclusions. Workpapers were provided to encourage reading and supplementary questions for each activity were given for each phase of a project. The following units were included: Air & Gas (13 experiments), Growing Crystals (2 experiments), What Dissolves? (3 experiments), Magnets (13 experiments), Electricity (16 experiments) Seeds, Mystery Powders, Structures, Clay Boats, Maple Syrup, Balance, Evaporation/Condensation, Effects of Temperature on different liquids, and Trees & Buds.

The main focus in the War Area was on the Revolutionary War, events leading up to the war and a dabbling in early history in America, the first several presidents and notable personalities who helped make America great. Field trips to nearby places were Lexington and Concord, Bunker Hill and The Freedom Trail. Focus was also placed on simple geography; i.e. the 13 colonies, with emphasis on Massachusetts and neighboring states.

4. HOW THE ROOM FUNCTIONS

Each day is started with a general meeting involving all the children and staff. This is a free discussion time which originally was started to help the children develop a positive self image, to allow them a time where they can develop the confidence to participate with their peers, and to be able to stand in front of a group and express themselves freely. A great deal of time is spent discussing appropriate behavior, developing social skills and awareness, developing an understanding and acceptance of others, discussing problems that may have arisen, planning the day's activities, and if an area is to be changed, soliciting ideas from the kids for new areas.

There is no time limit set but generally the meeting runs from 15 to 30 minutes at which time the children sign up for the various areas.

The children can choose what areas they would like to be in unless they are on a schedule. There usually is no attempt at grouping due to the individualized approach and also because the more advanced children will quite often work and help the others. Once this is done, the children move to their chosen areas. It is interesting to see new children come into the school. They are immediately taken "under the wing" and shown the ropes by the other children. There is absolutely no trouble adapting at this age level. The older children who have been in structured programs previously for any length of time, do have difficulties in adjusting.

5. AREA MOVEMENT

A child must complete some meaningful work in an area before he can leave for another. This is a joint decision between the teacher and child.

Here again, decision making plays an important role in the child's development as he now has to choose another area to work. The child may find the particular area of his choice full, as each area has space limitations, and may have to settle for second or even third choice. This process is continued throughout the school day.

6. RECORDING AND SCHEDULING

As a child moves through the area, the teacher in that area keeps a log on what the child has accomplished, where they are, and notes strengths and weaknesses. Each teacher has the responsibility of following four children and will periodically take all the records from the various areas and compile them into his record book. This is the time when it will become apparent if a child is skipping areas, not working up to level or needs some individual work in a specific area.

Should a child start avoiding an area, we want to know why. Has the child gone as far as he can at this particular time or are they simply avoiding the area because they don't like it?

If the latter is the case, then the child is put on a schedule until such time they show that they can handle the open situation. There are eleven children out of thirty two on some kind of schedule. Some are required to go to one area a day and some are scheduled all day everyday. Sometimes staff members will feel it is a lack of motivating or suitable materials within the area and all will work together to arrive at a mutual decision for a better program.

7. TEACHER ROLE

Large amounts of time are needed for planning, making teacher-made materials, and writing reports. Each child's report takes about seven hours.

It takes a new staff member at least two or three months to become acclimated to the climate at The Learning Center. Can you imagine working in a room completely open with seven or eight other adults, knowing that at any given moment any adult or child may be observing you or that a parent may "pop in" at any time? It is a highly charged atmosphere that demands the utmost of every person involved and I don't think it is possible for anyone to comprehend this without visiting the program.

Yet, turnovers are practically nonexistent as only four people have left in five years. One just becomes so totally involved and committed to the open classroom concept and the staff participation that they find it difficult to work in a traditional environment.

We have a number of prerequisites for new staff members. They must be proficient in total communication, have a master's degree in deaf or special education, experience or believe in open classroom philosophy and spend at least two days at the school to get a feel for us and us for them.

One of the most difficult aspects is to become completely child centered, and function as a resource person that motivates rather than spoon feeds.

NEW AREAS

From time to time during the year, areas have to be changed. Generally speaking, the Art Area and Quiet Area are permanent fixtures, and I guess one would have to say the Discovery Area is semipermanent as it has lasted almost two years. Other areas are dictated by children's interest or lack of interest as well as current events. As children seem to lose interest in an area or the staff feels that the areas stop providing stimulating, motivating experiences, the staff begins to brainstorm asking themselves if the children have gone as far as they can at the present time or is it that new approaches are needed. This is a time of teacher evaluation.

Should the decision be made that it is time to change an area, then this is discussed at group meetings with staff and children to see where the children's interests are. A list of areas are made from all the suggestions and a vote is taken to see what the new area will be.

The next step is for the staff to get together and discuss design, materials, colors, etc., and then to make the actual change. Much time is spent devising learning materials, and oftentimes color is the biggest decision. This usually takes place on Fridays and into the weekend, if necessary.

There have been a wide variety of areas including Disneyland, Monster, Transportation, Japan, Baby Area and others. Some great times have happened. The day the Japanese Area opened a deaf Japanese boy who had bicycled across country arrived at school. When the Walt Disney Area opened, who dropped in but Mickey Mouse, Goofy, and Donald Duck; and as you can imagine, the kids went wild. The Baby Area was started because of a sudden increase of pregnancies on the staff which elicited many questions from the kids. This evolved into a basic sex education course, which is part of the regular curriculum for older kids.

PROBLEMS

A. RESOLVED

1. Space design is critical and if anyone contemplates tearing out walls, etc., do it with a great deal of planning and assistance. Call in resource people. No one person can possibly have all the answers and with so much expertise available to us today, it should be utilized.

2. Record keeping was initially a major problem. It was difficult trying to keep accurate records as to what levels the children were, what children were participating in what areas and sometimes we would actually lose sight of some kids, because they were so quiet they'd never be noticed. Finally, (through much discussion, trial and error, and the adoption of a modified Kendall curriculum), the staff came up with an effective system as mentioned earlier. This requires much time and effort on the teacher's part. Parents are required to meet at least twice a year to go over the report of their child in detail.

B. CONTINUING PROBLEMS

1. At the present time we cannot provide adequate options for gifted, hyperactive, retarded and emotionally disturbed children. A separate area would resolve some of this, then mixing the children in as they are capable of handling the situation; however, at the present time, plans are being made to expand this aspect.

2. Parents, for a large part, still like to see a grade level. For years schools for the deaf move the kid up from grade to grade until finally the kid is 15, 16, 17 and graduates to high school. Imagine the parents' anger and frustration when they all of a sudden have a 16-year-old reading at the third or fourth grade level and no one has told the parents the facts. It's about time we all started being more honest and open with the parents and it's time parents demand it.

3. The openness of the school creates another problem. Take a typical school. Mrs. Smith or a visitor calls and wants to visit Johnny or the school. They are scheduled, arrive at school and are taken directly to Johnny's classroom or a choice classroom and see a lesson that has been prepared for three weeks. Wow! How impressive. How many schools are the parents or visitors allowed to wander about freely?

Parents are welcome at any time and although we prefer a phone call, it is not mandatory. Visitors are shown around and then are free to observe wherever they want. This, of course, means that they see the whole range from terrible to excellence.

Through parent meetings and individual consultations, much of this has been resolved, but there are some that zero in on only what they want to see or perceive.

4. Older children from other programs sometimes have difficulty handling the openness and the freedom. They have been stifled and have been told what to do, how to do it, and when to do it for so long that they just can't adapt.

5. Testing remains a problem as there are no adequate tests for deaf children. We find that the revised Stanford Achievement Test for the deaf, although improved, still is inadequate. What do tests really measure? One can teach the Stanford Achievement if that is what you want the child to learn. However, we started this June to administer Stanford Achievement to see if they show any patterns, glaring weaknesses and for comparative purposes. This area along with an effective research program to measure success or lack of success is desperately needed at The Learning Center.

POSITIVE ASPECTS

There are many positive attributes too numerous to list, but I would like to emphasize some of the more outstanding ones:

1. The child develops a good positive self-image by succeeding, by discussing their handicap and accepting it, by having deaf adults on the staff, and through the interaction they have with their peers and staff.

2. The children develop an independence and freedom of thought that enhances their potential as adults. Eventually they will finish

school and have to function independently. Their chances of success are that much greater if they can reason problems out and make independent decisions with rationality.

3. The children are tremendously motivated and challenged. Learning isn't a drudgery, but exciting, stimulating and interesting. They progress at their own individual rate and don't feel the pressure of failure. That isn't to say that it is wrong to experience failure, because life is full of misfortunes and failures. What is important is to learn how to handle these experiences. If a person doesn't succeed in a particular experience he should not feel guilty or less of a person.

4. Staff participation in discussions of goals, major policies, and philosophy provide a sense of unity that I have not experienced elsewhere. We do have some difficulties, but are faced realistically with little bickering and if actually needed, a problem may be resolved by a majority vote.

SUMMARY

In conclusion, I want to emphasize again that we are not claiming open classroom and total communication is a panacea for all children. Open classroom is not a license for kids to run wild or to lose respect for people and property. There is structure within open classroom.

Many places have tried open classroom and experienced failures and for good reason. The entire staff and administration must wholeheartedly support the concept. There has to be adequate planning and the utilization of resource people. What works for us may not work for your program, but maybe something else will. Changes should not be made for the sake of a change.

We have the advantage of a new school starting from scratch without any built in problems of staff or space. The supervising teacher of our lower program, Dermot Keohane, deserves a great deal of credit for the guidance and leadership he has provided to this phase of our program.

Let's try to make the classroom a lively, stimulating educational environment that the children want to be a part of. You do your part and the children will do the rest for they are by nature curious and eager to learn.

OPEN CLASSROOM AT KENDALL DEMONSTRATION ELEMENTARY SCHOOL

Fani Brown Miller, Head Teacher, Open Classroom, Kendall Demonstration Elementary School, Washington, D.C.

A growing expression of discontent and frustration by students, teachers, administrators has suggested that present teaching methods are often inadequate to cope with many contemporary classroom problems. A need has been indicated, to identify and become more familiar with alternative teaching methods and philosophies which will result in a more effective classroom experience.[1] Open education is one of the alternatives identified at Kendall School as a viable tool to educate hearing impaired children.

---

[1] Fantaski, Hogsgaard, Hughes, Miller and Newman, "The Eighth Day," an Open Education Workshop about the Future, p. 1, 1974.

Open Education is a philosophy of teaching and learning derived from ideas and practices evolved over many years in the British Infant and Primary Schools. It has roots in the "little red schoolhouse" of the 1800's, and the progressive movement of the 1930's. Open education draws heavily on the knowledge of child development gained during the last fifty odd years regarding the ways children learn. It suggests an educational methodology in which there is a flexible curriculum designed to meet the social, academic and emotional needs of each child.

It is difficult to give a specific definition of Open Education because there is no one specific model. Establishing interest centers, individualizing instruction and creating space does not constitute Open Education. It is not a set of techniques alone. Open Education for the hearing impaired child is best understood in terms of the following underlying assumptions and generalizations about children, learning, and knowledge:

A hearing impaired child is curious and fascinated with the world. S/he is eager to try things and make sense of his/her life experiences.

A hearing impaired child is a thinking individual, able to understand, capable of accepting responsibility and eager to make choices and decisions for him/herself.

A hearing impaired child is a unique individual and can best learn at his/her own rate and his/her own style, while following his/her own curiosity and desire to learn.

A hearing impaired child is a whole being whose physical, mental, social and emotional development occur simultaneously.

A hearing impaired child is open, receptive and perceptive.. S/he does not shut him/herself off from the strange confused world around him/her. S/he observes it closely and sharply, tries to take it all in.

Learning for the hearing impaired proceeds from the concrete to the abstract through active exploration of and interaction with a rich learning environment.

Self-motivated learning is self-perpetuating and more lasting than that which is forced.

Errors are a part of the learning process; they are to be expected for they contain essential information to further learning.

Learning can occur more readily from joy than from fear.

Learning occurs more readily from active participation than from passive attending.

Knowledge is a system of strategies and processes. It is a means of education, not its end.

A child has the personal capacity to confront and handle new experiences successfully. In our increasingly complex world, a problem solving approach is generally more appropriate than rote memory of facts.

Knowledge is a function of one's personal integration of experiences. It resides with the knower, not in its public expression.

The teacher is the single most important educational influence in an open education program. S/he holds the key to the success or failure of an attempt to alter the learning environment for children. To provide a stimulating classroom environment where children learn in an atmosphere of trust, respect and confidence is no easy task. For the teacher, open education implies a commitment toward the fundamental belief in each child's intellectual and social uniqueness. Therefore, the traditional role of the teacher as a dispenser of information expands to the more encompassing one of facilitator, supporter, resource person and diagnostician.

As a facilitator the teacher: creates an atmosphere of acceptance and mutual respect between adults and children and among children, provides a learning model by exploring and inquiring with other learners, provides a cognitively rich environment through well prepared related learning centers in a variety of content areas (language, science, math, etc.).

As a supporter the teacher: creates an environment where a free exchange of ideas is encouraged; provides opportunities for decision-making with and without supervision; creates a non-punitive environment in which risks are taken as a natural part of growth; and plans tasks with children and sets realistic goals that can be successfully completed within a determined period of time.

As a resource person the teacher: provides opportunities for the development of self-assessment skills in the child; and identifies information sources in addition to those available in the classroom environment. (These sources include persons, places and things within the school environment or the community outside the school.)

As a diagnostician the teacher: identifies the specific skill needs of each child; recognizes the social and emotional needs of each child; determines the level at which each child can achieve success in all content areas.[2]

The "open classroom" program at Kendall School was initiated by removing the walls that separated six classrooms. Within the newly-created space lay an infinite variety of organizational and curricular possibilities. The goal was to create an educational environment that, while informal, would provide order, stability and a challenging learning environment for some of the primary-age children of Kendall School.

The open space thus created is flexible. There are few interior walls, so learning areas can be continuous. The space can be changed in shape, size and usage. The children and adults can work in different-sized groups and move easily to other parts of the space. The space also has the flexibility of being private, semi-enclosed or completely open. It encourages movement of people, furnishings and resources. There is a far greater potential for individualized instruction and varied teaching styles.

Visibility is increased in an open space and unity of programming and blending of personalities is required.

With the addition of an open education philosophy to an open space setting, the teacher becomes a member of a team; a team being a grouping of teachers that utilize collective knowledge. A team (at Kendall) builds on the skills, knowledge, interests and information of its members. The operating principles for the team are: (i) sharing oneself; (ii) sharing competencies; and (iii) utilizing resources of other and maximizing chances of success through collaboration and (iv) distribution of responsibilities.

---

[2] Ibid., pp. 6-8.

It is an investment in hard work, time, and personal growth for the teacher. Each method and technique which the teacher employs is visible to every member of the team. The teacher in the open space situation is under constant observation by other colleagues, administrators and visitors.

The "open space" team at Kendall consists of four master teachers, one head teacher and two teacher aides. Each master teacher is responsible for one area of the room, "teaching" one academic discipline to all children and managing a family group.

The team meets a minimum of two days a week from two-six hours per meeting. Some meetings begin before school and commence again after the school day. Some topics team meetings deal with are: (1) development of unit plans; (2) coordination of curricular program efforts; (3) development and facilitation of efficient record keeping devices; (4) communication as a team; and (5) management and scheduling of space.

For the child, teaming allows for student contact with more than one way of solving problems and more than one set of reactions.

The children in Kendall's "open space" program are a multi-age grouping of 7–10 year olds with a corresponding range in academic ability from minimal basic skills upward. Commonality of interests cuts across age barriers. Children do not develop skills or interests at the same age or rate. Children learn in different ways, at different times, from stimuli around them that are of interest. They learn from one another, and in many instances, are natural teachers. The older children provide leadership models, and a helping relationship among children in which they share resources and establish cooperative relationships is developed. The open-endedness of the materials allows each child to work successfully at his/her level.

Development of curriculum goals, setting of student performance standards, and organization of student movement about the room make monitoring of student progress a necessary responsibility of the "open space" teachers at Kendall. The "open space" teachers keep exceptionally detailed reports on each child. Daily evaluations and reports in the areas of language, science, math and art are compiled on each child by every teacher in the "open space" room. These reports are then compiled into weekly and session reports. A child's file would include samples of the child's work, daily reports, anecdotal reports and observations. Frequent team meetings are scheduled to discuss a child's strengths and weaknesses, to evaluate a child's performance, to decide on the appropriate grouping, or the optimum teaching approach for a particular child.

A key to the "open space" program at Kendall is the integration of learning from many academic areas and the organization of instructional materials, services, and learning resources (a thematic curricular approach).

Working as a team, the teachers design teaching/learning units in such a way to correlate the material to be taught in the various subject areas. Academic skills are developed in flexible self-directed ways that allow learning to become part of the child's life style outside as well as in the classroom. The Rhode Island Language Curriculum is the base for teaching fundamental language skills at K.D.E.S. It is a psycholinguistically based scheme of teaching transformational grammar. Using the thematic approach, vocabulary development and structured reinforcement of language occur throughout the day as well as structured language teaching.

A unit on plant growth, recently completed, integrated the four academic areas of Language, Math, Science and Art. In the science area, the children experienced actual identification of seeds, planting of seeds, observation of plant growth, and the effects of water, sunlight and soil on growth. In the language area they composed short stories of their science experiences, and were introduced to the story, "Jack and the Beanstalk." In math, the children classified seeds, measured plant growth and learned basic addition skills. And in art, they used seeds and other parts of plants to create a variety of exciting projects.

As the children move from area to area in the room, the concepts, language and vocabulary of a given unit are continuously reinforced and reviewed, as is the child's understanding of their relationship. Content is presented in challenging and relevant ways, using technological and human resources. Many instructional devices are used by teachers to facilitate the child's learning: 8 mm film loops, 16 mm films, slides, filmstrips, videotapes, flash cards, games objects, pictures, books, blackboards, dittoes and computer lessons. The philosophy of total communication is an integral part of the program, whatever modality best suits the needs of the child is employed and all modes are exemplified by the master teachers in the program.

The atmosphere of open space is readily apparent when one enters the room, and it is reflected by subtle cues in the physical arrangement as well as by the style of teaching. The "open space" room is divided into four major learning centers; a language center, a math center, a science center and an art center. Each area will ultimately provide a kaleidoscopic variety of learning experiences and the possibility of numerous projects to be pursued independently or with others.

The physical environment of open space at Kendall is not static, but constantly changing. As time progressed and both the teachers and children felt comfortable with the environment, two of the four major learning areas were further divided. Within the math area, subcenters dealing with measurement, computation, math games and time were created. Within the language area, subcenters of reading, independent work, using audiovisual equipment and language games were established. Both the math and language areas provide the children with options and contracts for working in these areas. The children are required to perform a specified number of tasks before exercising a choice. Areas are color coded and materials are placed in labelled folders.

A day in "open space" for the 23 multi-aged children in the program begins at 8:50 with hearing aid check. At present, the children in "open space" are using individal hearing aids. Each morning, with the help of a teacher or teacher's aide, each child checks his/her batteries and hearing aid. The hearing aid check is a two part procedure, a visual check and a listening check.

After hearing aid check, the child reports to his/her family group. Each of the four teachers in "open space" is assigned five or six children who comprise his/her family group. Family groups in "open space" facilitate management of the 23 children, provide individual greeting for the child, and allow for small group cohesiveness. Each teacher is responsible for compiling reports concerning members in his/her family group and also for parent contact and supportive services for members of his/her family group. During family group time in the morning, teachers may have short discussions with their groups or have materials available for their use. At about 9:20 A.M., all children and teachers report to the large group area. One teacher per month is responsible for conducting Large Group Time. This is a time for general announcements, free talk, sharing ideas, and pledge of allegiance.

From the large group area the children move on a structured basis into academic groupings to one of the four areas of the room—language, math, art, social science. At mid-morning, the children return to their family groups for snack and recess break. The family group teacher reinforces good table manners, social behaviors and encourages good communication during snack and morning recess break. Following recess they return to academic groupings and continue to move to scheduled areas, remaining in a given area for about 45 minutes. There is a 45 minute break for lunch, after which the children return to Large Group Area for assignment to speech groups. They receive speech and auditory training throughout the day; however, 20 minutes following lunch have been allotted for specific speech auditory training. Speech and auditory training are an integral part of Total Communication Program in "open space". This time provides for individualized instruction in this area.

At 2 o'clock the children returned to the Large Group Area. On Monday, Wednesday, and Friday, they leave the room for physical education and art. On Tuesday and Thursday, the children are allowed free choice time. The major purpose of free choice on Tuesday and Thursday afternoons is to encourage the child to make a self-determined decision. Each teacher provides a special activity which guides the child in decision making and expanding learning. The activity may be related to the unit being studied at the time, or it may be one in which children have expressed an interest. These activities have included cooking, crocheting, reading games, checkers, observing the guinea pigs, Project Life, and painting, to name a few. The teachers are always cognizant of those children who need specific direction, as well as those who are in the process of becoming self-directing. They add or remove materials when needed to maintain a stimulating environment.

The environment of "open space" reflects the theory that learning occurs most naturally during periods of intense involvement, active doing and as a part of living. Learning results from experiencing. It occurs most thoroughly when personal motivation and interest are high. The program's task is to provide an environment that encourages the hearing impaired child to learn in new ways, to develop talents and interests and to continue learning, in short, to be able to function in an ever changing world and to be an enthusiastic lifelong learner.

Structure is the key to good educational practice. The "open space" program is very structured, planned and organized by the teachers.

They have clear ideas as to what the students' strengths and weaknesses are and plan accordingly. The individual work the child may choose is not just whatever he or she wants to do, but is within the structure set up by the teachers and, sometimes the students, specifically geared to her/his educational goals or needs.

As the program advances, the time scheduling will change and the students will move more by performance time needs as opposed to clock time. The program will become more individual and better suit the needs of each child. One must be cautioned, that the move towards an effective open classroom situation requires time, hard work and efficient planning and organization.

A successful open classroom situation cannot happen overnight. It takes planning, organization and learning on the part of both the teacher and child. As both the children and the teachers become comfortable with the situation there is an increase in informality and independent learning.

Observations I have made over the past three months in the "open space" room are:

1. Social interaction.—An increased number of interactions between children and teachers and student. There is a greater interaction of "open space" children between themselves than visible in other situations at Kendall. Some of the children have become independent in seeking opportunities for instruction.

2. Behavior changes.—A behavior modification system for reinforcement of appropriate academic and social behaviors in the "open space" room was heavily utilized the early part of the year in "open space". The system is no longer emphasized.

Discipline problems are minimal. Whether this is due to the childrens interest and excitement with the program in open space or the behavior modification program is not obvious.

3. Academic progress.—There has been observable learning and interest in learning during the past few months with unit on plant growth. The children are anxious to observe the seed growth, communicate and share their observations with peers and adults. Concept development and language skills seem to have improved markedly. And the children seem truly excited about learning.

4. The physical space that houses the open space program has acoustical treatment needs which are presently being investigated by acoustical consultants with the Kendall staff. At present, the greatest single source of noise in the room originates from the air-conditioners.

5. Not all hearing impaired children can function effectively in the "open space" program. Hearing impaired children with severe emotional problems or additional handicaps may find the "open space" program overwhelming and threatening. Visual distractability and noise tolerance also need to be considered in placing children in the "open space" program. Kendall is hoping to develop an objective evaluation for placement of children in this program. At present, placement is based on teacher input and observation.

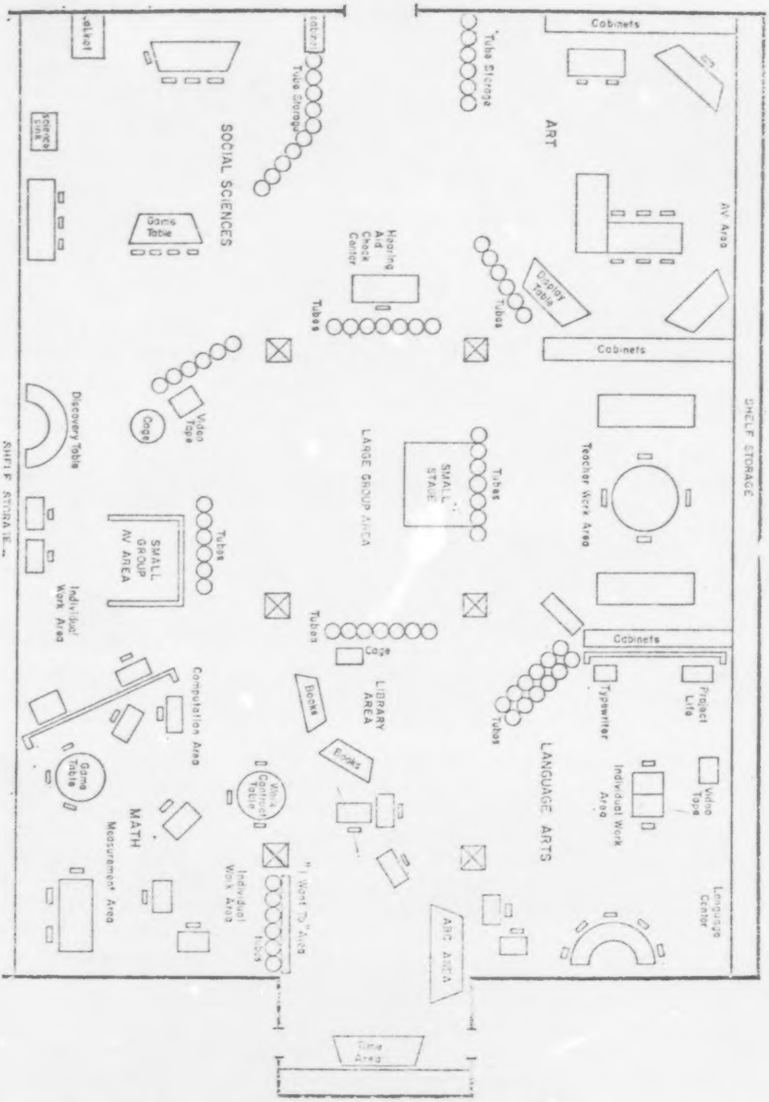

Lockers
Cabinet
Tube Storage
Science Sink
SOCIAL SCIENCES
Game Table
Tube Storage
ART
Cabinets
AV Area
Hearing Aid Check Center
Tubes
Display Table
Tubes
Cabinets
Discovery Table
Cage
Video Tape
LARGE GROUP AREA
SMALL STAGE
Tubes
Teacher Work Area
SHELF STORAGE
SHELF STORAGE
SMALL GROUP AV AREA
Tubes
Individual Work Area
Tubes
Cage
Cabinets
Computation Area
LIBRARY AREA
Books
Books
Typewriter
Project Life
Tubes
LANGUAGE ARTS
Individual Work Area
Video Tape
Game Table
Work Contract Table
MATH
Measurement Area
"I Want To" Area
Individual Work Area
Tubes
ABC AREA
Language Center
Time Area

FIGURE 1.—Illustration of the physical arrangement of KDES open classroom.

DEVELOPING SELF AWARENESS IN DEAF STUDENTS

Jack Slemenda, M.Ed., Barbara Siegel, M.Ed., Lynda Hemmings, M.S., Western Penn. School for the Deaf, Pittsburgh, Pa.

Recent attention has been focused on the problems in the development of self-awareness in deaf students. In an attempt to meet this need and to enable students to gain insight both into themselves and into the reality of their deafness, a unit on developing self-awareness was created.

First, four levels of awareness were identified: (1) sensory awareness, (2) awareness of self as it relates to others, (3) awareness of deafness as a sensory impairment, and (4) awareness of the contributions of deaf adults. By involving the students in activities at each of the four levels and by relating these to the students, a greater awareness of self could be encouraged. The development of self-awareness remained the underlying theme. By organizing learning centers, individual and group activities and a variety of field trips, it was possible to productively integrate content areas, respect individual learning styles and provide opportunities for active participation, shared experiences, and peer teaching. By introducing the students to deaf adults in a variety of careers, the teachers could expose the students to the range of potential possibilities open to them.

Although some reading and general awareness activities took place independently, most of the reading, language, math and science were shared by the combined efforts of a two-teacher team, a self-contained classroom teacher and twenty-five students aged 11–13. Most of the joint activities were planned for the mornings, although spontaneous "happenings" occurred throughout the day.

SENSORY AWARENESS

With an emphasis on a more child-centered approach, the students were given access to a Polaroid camera, an instamatic camera, and a Sony videotape unit with which to record their activities. They freely used the equipment to capture specific feelings and emotional expressions with an emphasis on expanding vocabulary through synonyms. The key to learning in this situation was the direct involvement of the students operating the equipment so that their activities could be displayed and shown later to provide additional reinforcement of the learning activity.

The follow-up activities provided the students with the following choice: to write this experience in their diary after discussing the activity with the teacher or to write the vocabulary for their "awareness of feelings" and then develop a matching test with a corresponding synonym. The students could use a ditto master and duplicate one copy for each member of the class. Also, they were free to make a transparency and be responsible for presenting a lesson to as many students as were willing to participate.

As one student directed the lesson, the teacher was free to work with other students. The entire scope of the lesson afforded the student, who was really the teacher in this situation, the opportunity to teach synonyms to the others while correctly reinforcing his own vocabulary.

There was a "tactile awareness" chart displayed on the wall outside the classroom. The teachers collected various objects with different shapes, sizes, and textures, and asked the students to select one of the objects and describe it.

AWARENESS OF SELF AS IT RELATES TO OTHERS

The object here was to concentrate on the child as the initiator, capable of evoking a variety of responses from his peers. One student was asked to videotape and play back a variety of awareness experiences, so that the class could follow a sequence of events and see how one students' actions led to another's response. Subsequent discussions tried to enable the students to understand that their actions, dispositions and personality traits can and do affect peer relationships.

One specific experience involved videotaping the social interaction between two students over a week's time. A third student videotaped interaction in gym, art class and three classroom situations. Since this was not a "staged" activity, everyone anticipated the replay. The class identified one of the students as the antagonist in all of the taped situations. From that time, it took two weeks to shape more positive behavior, so that the antagonist could exercise more self-discipline.

AWARENESS OF DEAFNESS AS A SENSORY IMPAIRMENT

There were two goals within this level of awareness. The first goal was to provide each student with a variety of experiences to broaden his understanding of deafness as a sensory impairment. The second goal was to help him discover the nationwide distribution of deaf students.

As part of the teachers' attempt to help the students develop greater self awareness and to broaden their perspective of deafness as a sensory impairment, the goals for them here included learning how sound travels to the brain, how hearing may become impaired, how deafness is diagnosed, and how hearing aids are recommended.

Davis and Silverman's "Hearing and Deafness" was used as a source from which to prepare materials. Although information was disseminated through discussion, there were some relevant films and filmstrips on the ear and hearing.

On another occasion, the school audiologist spoke with the class on testing and the audiogram. She had previously been videotaped, testing the hearing of an eight-year old girl. The camera followed the girl's responses (or lack of responses) as the audiologist changed frequencies, and showed how the responses were plotted on the audiogram. The tape was stopped periodically to enable the audiologist to explain what was happening. Afterwards, she used transparencies to compare the audiograms of two students with different kinds of losses. The students' many questions implied a sincere interest in this discussion.

The material was presented in a relatively simple and factual way and encouraged the students to deal with the basic concepts through reading, writings, crossword puzzles, drawings, role playing, teacher-designed games, and classroom discussions.

MATH ACTIVITIES

To realize the distribution of deaf students throughout the country, the class gathered data from the April, 1973 issue of the *American Annals of the Deaf* and computed the number of school-age deaf children for each state. Each student was assigned two states. All of the information was then placed on a bar graph. Several students were assigned the task of designing a display board outside one of the classrooms to illustrate their findings.

In preparation for this activity, the students have been involved in learning measuring skills. A pre-test measuring their competencies was designed by the teachers. For each area a minimal acceptance performance was established. Measuring activities were analyzed in terms of six subconcepts: (1) converting inches to feet, (2) converting feet to yards, (3) comparing length and width, (4) measuring perimeter and area, (5) graphing, and (6) scaling.

Some measuring tasks involved finding the perimeter of squares, rectangles, triangles, hexagons, octagons and trapezoids. Some of the other tasks included measuring objects in the room.

Using a unit square to find area was the next competency practiced. Students were given drawings and asked to determine the number of unit squares. Then they proceeded to find the area by multiplying length times width, given the measurements in units. Finally, the students found the area of linear objects, given the measurements in inches and feet. Measuring the area of a movie screen and a classroom were culminating tasks.

In order to give the students insight into what an audiogram measures, they were guided through a series of related graphing tasks. They began by graphing three-dimensionally the number of boys, girls and teachers in the classroom, using blocks to represent the respective persons. Upon completion, the students graphed their findings. The activities encouraged social interaction and cooperation as well as providing the students an opportunity to use their measuring skills and vocabulary.

The tasks increased in terms of difficulty until the students were given their individual hearing measurements in decibels which they graphed. By this time, they had some understanding of an audiogram, and they were quite interested in discovering another aspect of themselves.

Finally, the students were asked to find the number of deaf school-age children in the United States. By this time, they had the necessary skills and were eager to discover just what part they were of the total population. They were a bit overwhelmed at the figure 50,002 in comparison with the total population.

The students kept individual record sheets and showed these to the teachers. The students found great satisfaction in completing the tasks, and demonstrated an improved degree of competence on the post-test.

AWARENESS OF CONTRIBUTIONS OF DEAF ADULTS

At this level the teachers were interested in helping the students realize that, in spite of their hearings loss, they are capable of formulating goals and aspirations commensurate with their abilities upon high school graduation.

To give concrete experiences with question-formulation, and knowledge about deaf contributions through varied media and more direct involvement, a series of interviews was arranged with deaf faculty members, professionals and skilled workers in the community. Initially, the group was guided into formulating twenty questions as the basis of the interview. Questions included: Were you born deaf? If not, when did you lose your hearing? Are your parents deaf? How do you communicate?

The students then interviewed each other as a practice in preparation for subsequent interviews. The interviews were followed up with biographical sketches. The students discovered that their experiences regarding etiology, age of onset, and academic placement paralleled the information revealed in past demographic studies.

Several small panels of students interviewed several deaf adults, including: teachers at W.P.S.D., a research scientist, a retired teacher, a baker and a painter. A visit to the home of the retired teacher led to another experience. As the interview came to a close, she asked the students if they might be interested in seeing how her TV phone operated.

She phoned the middle school director to demonstrate and then allowed the students to send a message. They became excited to see their words appear on the screen. After the group returned to school, they compared this equipment to the school's TTY, which recorded their conversation on paper. This interview was videotaped by the students and later shared with the rest of the group. Naturally, the teachers were bombarded with questions pertaining to cost, availability, technology and related hardware packages.

Hopefully, through this interview process, the teachers were able to effect some change in helping the students gain some insight into themselves by giving them the opportunity to meet deaf people of various educational backgrounds as well as varying occupational levels. It was our intention to provide some input early in the students' schooling, so that they might begin to develop realistic expectations for future careers.

Throughout this two month unit, the students read three different stories or poems each week. The poems were selected from THE SILENT MUSE; a main source for stories was THE DEAF AMERICAN. The monthly NTID FOCUS and relevant newspaper articles were used for recreational reading. Each of the three teachers was responsible for presenting the same selection on Mondays, Wednesdays and Fridays. On Monday mornings, the students signed up for the story or poem they wanted to read and the day of reading. This system provided the possibility for the flow of children from the classroom with minimal confusion. Upon completing a poem, the follow-up activities varied from having the students memorize passages, to interpreting the symbolism through drawing pictures, to discussing or acting out the poem as they were able to relate to it.

The reading stories abstracted from THE DEAF AMERICAN were rewritten on a linguistic level compatible with the students' reading levels. The students were highly motivated to read about individuals with whom they share a common denominator—deafness.

CONCLUSION

Although we have by no means exhausted the possibilities offered by the concept of "Self Awareness", the uniqueness and success of this unit owes itself to the following variables:

1. The high level of sustained student interest, personal involvement, self-motivation and identification.
2. The pressing need for a sophistication of self-concept units that bring the student to a realistic appraisal of his abilities and potential.
3. The humanistic emphasis inherent in the affective domain.
4. The added strength of the cognitive domain in support of the affective domain.
5. The integration of both domains through a visual format provided by a variety of media.
6. The combination of all content areas within the global concept.
7. The use of varied techniques and approaches from several methodologies reflecting individual teacher personalities.
8. The positive aspects of a more open approach.
9. The ease of adapting this type of unit for all age levels.

One of the numerous responsibilities confronting educators of the deaf is to foster a workable learning environment in which the student is able to respond in such a way that the meaningful outcome of that response is secured and processed with suitable information, so that he can, with confidence, continue his developmental process. This unit intended to do just that.

PROJECT LIFE: A POTENTIAL EXTENSION OF THE FORMAL LEARNING ENVIRONMENT

Glen S. Pfau, Director, Ph. D., Project Life, Gallaudet College, Washington, D.C.; David A. Spidal, Ph. D., Principal, New York School for the Deaf, White Plains, N.Y.

Discontent is the first step in the progress of a man or a nation.—Wilde

The profession of education of the deaf has been searching for the key to unlock reading and language problems for centuries. Hundreds of person-years of research and thousands of person-years of instructional experimentation have been expended in search of the optimal manner of teaching language and reading to those children who are severely hearing impaired from birth. Still, in the 1970's, we find the vast majority of congenitally deaf students reading at a level between the third and fifth grade at the time when they graduate from high school.

Is the language/reading answer to be found in the method of instruction—Fitzgerald Key, Barry Five-Slate, Wing's Symbols, or in any of the other historically popular methodologies? Is the answer inherent within the communication modality—the oral approach, total communication, the Rochester Method, manual communication, or Cued Speech? Some may say none of the above factors is critical—that the real solution to the language and reading problems of deaf children lies in early detection and early amplification, systematic integration of the Northampton Charts, low frequency amplification, a comprehensive program of auditory training, the unisensory or multisensory approach to language instruction, the natural or structured method of teaching language, speechreading, the linguistic approach to the teaching of language/reading, or in instructional technology.

It is proposed that the determining factor may not be found in any of the above, but in the amount of meaningful exposure to language that the child experiences. It may initially sound heretical to say that language learning is not as dependent upon quality of instruction as it is upon quantity! Nevertheless, it is postulated that congenitally deaf children receive only a small part of the meaningful interaction with language that their hearing counterparts receive.

In the last several decades, educators of the deaf have made a large number of significant improvements in instructional methodology and content. However, the "point of diminishing returns" has been surpassed, since teaching excellence has been offset by a reduction in the duration of the student's meaningful interaction with language. A child who has never been in a swimming pool (or some other body of water) would probably never learn to swim in two or three lessons, even if the teacher were Mark Spitz (winner of seven gold medals in the 1972 Olympics). Again, the quality of instruction, though important, may not be as crucial as the quantity.

In a recent informal survey of some representative schools for the deaf, it was found that most students were exposed to formal language instruction less than 200 hours per academic year. There are a total of 8,760 hours in a calendar year (24 hours per day times 365 days per year). Assuming a full 200 hours were expended by each student in language instruction per year, this would still only represent approximately 2.3 percent of the number of hours in the total year.

It is contended by some that efficient language and reading instruction can only take place on an individualized basis. This allows for diagnostic-prescriptive teaching, self pacing, careful step-by-step guidance, immediate feedback regarding correct and incorrect responses, variance in instructional methodology and content depending upon student ability and interest, and maximal student participation. Under this condition, the average student gets less than 75 hours of such language instruction per year, or under one percent of the 8,760 hours previously indicated in a year.

Regardless of the quality of such instruction time, it is simply insufficient in magnitude to master the complexity of the English language. The 99 percent of the student's time that is used for other activities represents an area that must be capitalized on in the future if the student is going to make the quantum leap forward in language and reading ability approaching the normally hearing student.

It is alarming to note that the trend is exactly the opposite from what is deemed necessary. The students' and teachers' days are getting shorter and shorter; the academic year is likewise shrinking, with more holiday, vacation, and teacher-workshop interruptions; in addition, most students' school day is filled with more activities than ever before which do not provide the necessary language interaction and reinforcement needed to complement and extend the language concepts introduced in the classroom.

It is estimated that the normally hearing child has encountered more than 100 million meaningful contacts with language by the time he/she begins school. In contrast, many congenitally deaf children have had no meaningful interaction with language, either receptively or expressively, by the time they begin school. The hearing child thus not only has a tremendous "running start" on the deaf child but has acquired language at an optimal time.

It is absurd for educators of the deaf to feel that they can offset this entry differential simply by an improved quality in instruction. Though quality instruction is important, it is simply inadequate to make up for the magnitude of "ground that has been lost" in the first several years of life. It would seem that educators must either accept inferior language/reading of deaf children as normal and unavoidable, or be discontent and attempt to do something about it. This paper addresses itself to possibly the only solution to the awesome problem—that of providing the congenitally deaf child with more meaningful interaction with language, both during the preschool and academic years.

During the academic years, one alternative might be to go to an 8-hour instructional day—8 a.m. to 5 p.m.—with at least 3–4 hours of each day specifically geared to individualized and group language/reading instruction. The argument might be proposed, "Educators of other handicapped and non-handicapped children do not have an 8-hour day of formal instruction—why should we?" It can be obviously retorted that other educators are not dealing with children who must acquire their language through the visual modality—a sensory organ not intended for this purpose. Second, non-deaf children entering school have mastered the basic linguistic aspects of the English language and may have a base vocabulary of up to 10,000 words.

Though it is reasonable to argue that schools for the deaf should provide an 8-hour instructional day, educators are demanding shorter and shorter work days with longer planning, paper grading, and rest periods. Since it is highly improbable that the duration of academic instruction will be increased during the school day, we must begin to look for alternative strategies for accomplishing this crucial objective.

As far as language and reading are concerned, it is obvious that educators of the deaf are going to have to view themselves more as planners of learning events than the traditional view of personally teaching all that must be acquired. A portion of the time that was formerly considered "free" to the student should be utilized for language/reading instruction. These blocks of time include after-school hours, weekends, holiday periods, summer vacation periods, and times in which students are incapacitated. Without capitalizing upon the potential resource of free time, we are doomed to a continuation of a very low reading/language level for the vast majority of graduates from schools for the deaf.

Paraprofessionals, parents, dormitory counselors, and older students must be viewed as valuable links in the teaching of language and reading. Teachers must precisely diagnose where each child is functioning in language and reading and must prescribe relevant, meaningful activities at appropriate student levels which will be taking place outside normal class time. The "outside teachers" must be given specific direction with daily or weekly accountability to the teacher.

There are hundreds of meaningful language and reading activities that could and must take place outside of the traditional school day. Though there is no single panacea for reading problems, the Project Life Program has come to be recognized as one of the most comprehensive resources available, and one that is constructed entirely around motivational learning principles. All instructional materials and related equipment have been developed to appeal to the students' interests, meet immediate needs, capitalize on the student's past experience, and furnish functional information. The Project Life Program has the added advantage of being able to be effectively administered by paraprofessionals, parents, dormitory counselors, and/or older deaf or hearing students.

Project Life began in 1963 and is presently in its twelfth year of continuous funding under the sponsorship of the U.S. Office of Education. With a history of research dating back to the 1920's, the Project embarked on a mission to devise ways of using well-illustrated instructional materials to make language and reading more meaningful than most traditional instruction.

The heart of Project Life is the programmed filmstrip. These instructional materials used in conjunction with specially designed teaching machines, focus on the areas of perceptual training, perceptual/thinking, and language/reading. Approximately 500 programmed filmstrips have been developed to date with the system ever-expanding into upper language levels and subject matter areas. In addition, special support materials have been developed, including single concept picture dictionaries, workbooks, storybooks, and reading experience filmstrip series.

In the short period of time that the Project Life materials have been available, some 2,000 schools and a variety of clinical, hospital, home, and residential programs have begun using them. More than half of all programs and schools for the deaf in the United States have acquired some or all of the Project Life Program. The success of the program has been remarkable, both within and outside of the classroom.

As previously implied, no single methodology, technique, or body of instructional materials is capable of providing the sufficient language/reading exposures needed for a congenitally deaf student. It will take a commitment from a variety of different personnel impinging upon the student, along with an arsenal of instructional media. Single-shot injections of educational materials or programs limited in scope and magnitude are doomed to failure.

Though the communication modality war has raged for hundreds of years, the key to language and reading success may not lie therein, per se. Thousands of personal examples could be given to reinforce this contention. As one examines a few isolated cases, it becomes readily apparent that all exemplary models were inundated with meaningful language.

1. *Tactile communication.*—Anne Sullivan saturated Helen Keller with meaningful and individualized language from early morning until late at night. Helen writes in her autobiography: "Even when I studied most earnestly it seemed more like play than work."
2. *Total communication.*—Howard Hofsteader, M.A., was congenitally deaf and did not start school until the age of nine. He was edu-

cated primarily by his parents, who believed that Howard should be given the same language background that a normally hearing child possesses upon school entry. He entered the Alabama School for the Deaf at the fourth grade, was shifted to the seventh grade after one year, and then to the ninth. He graduated from the 12th grade and entered Gallaudet College when he was 14. He gives credit to his parents for their long hours of language teaching.

3. *Oral education.*—Robert Lillie, Ph. D., University of Maryland (Nutrition and Poultry Science, 1949) was congenitally deaf. He attended the Wright Oral School in New City and is presently employed by the U.S. Department of Agriculture, Beltsville, Md. His achievement is traced back to an excellent language background having been acquired by long hours of teaching and study outside the normal school day.

4. *Cued speech.*—Leah Henegar was born deaf (107dB loss in her better ear) on September 12, 1964, from maternal rubella. When Leah was 5 years and 10 months old, and after having been exposed to Cued Speech at home for 3 years and 10 months, her receptive vocabulary was estimated at between 2500 and 3000 words. These included a wide variety of idioms, pronouns, prepositions, articles, and verb tense forms. In schools for normally hearing children, she has made normal progress (presently in 5th grade) and is consistently in the top reading group in her classes. Again, her success is attributed to intensive early language stimulation in a manner comprehensible to her.

The common thread intertwining the above examples is meaningful language saturation. In each case, there were "outside teachers" who realized that there would be limited academic success if all instruction were left to the classroom teacher.

In summary, one of the first priorities of superintendents and principals in schools for the deaf should be to investigate and implement procedures for (1) involving parents of preschool deaf children in the education of their child, (2) extending the language and reading/teaching stimulation beyond the normal academic day, and (3) extending and reevaluating the school day to ensure that every minute is used most prudently for language stimulation and enrichment.

Since language and reading is pervasive, impinging upon all other subject matter areas, the congenitally deaf student must have a firm foundation in them. When such a goal has been realized, the teaching of the other important content areas will not only be more efficient but more enjoyable to both the teacher and student. Most importantly, however, with such language/reading competency, the deaf person will mature into a happy and productive member of society, capable of interacting meaningfully with our language-oriented world!

BEHAVIORAL ASPECTS OF COMMUNICATION: IMPLICATIONS FOR AUDITORY-ORAL AND TOTAL COMMUNICATION ADVOCATES

Richard L. Baldwin, Ed.D., Visiting Assistant Professor, Texas Tech University

It is relatively safe to assume that parents and teachers of hearing impaired children believe that intelligible speech is one of several worthy goals in the education of hearing impaired children. When de l'Epee and Samuel Heinicke debated the oral-manual controversy in the late 18th century they began a discussion which is still prevalent today. In 1975 the controversy involves the same philosophies, but the sematic labels have changed to auditory-oral and total communication.

One common aspect of both approaches is the goal of intelligible speech. Proponents of the two philosophies differ not on the goal itself, but on the means of achieving intelligible speech. Persons who advocate an auditory-oral approach believe that the incorporation of signing and fingerspelling into the curriculum for the hearing impaired child will interfere with his use of speech as a means of communication. On the other hand, proponents of the total communication approach argue that their methods will not retard the development of a deaf student's speech (Vernon, 1971).

The purpose of this paper is not to support or refute the merits of either approach, but rather to discuss the behavioral aspects of communication and to suggest ways the teacher and parent can increase a hearing impaired child's verbal behavior.

There are two classes of behavior; respondent and operant. Respondent behavior, commonly referred to as reflex behavior, is elicited by a stimulus which is followed by a response. Examples of respondent behaviors are the patellar, startle, and the pupillary reflexes. These respondent behaviors are not controlled by their consequences. Operant behaviors, however, are controlled by the consequences which immediately follow them.

Speech is an operant behavior that can be observed and measured. Behaviors that can be observed and measured can be changed by systematically reinforcing or punishing emitted responses. The implication of this reasoning is that teachers and parents control the probability of a hearing impaired child's use of speech as a means of communicating. It follows that an understanding of the behavioral aspects of verbal communication and the techniques necessary to incorporate these principles in the classroom be as important to the educators and parents as the traditional material taught in courses preparing teachers to teach profoundly hearing impaired children to talk.

Operant behavior is explained with the following terms and symbols: stimulus (S), response (R), a reinforcing event (S^+), a nonreinforcing event (S^-). A response that is systematically reinforced $R \rightarrow S^+$ will increase and a response that is systematically punished $R \rightarrow S^-$ will decrease (Hall, 1971).

S		S^-
Event or environmental condition which prompts the hearing impaired child to communicate	Talking Writing Fingerspelling Signing Gesturing	The event reinforcing or punishing) which occurs immediately after the child's verbalization

FIGURE 1. Model of operant communicative behavior.

The stim[illegible] (S) in the operant model of communicative behavior, illustrated in Figure 1, is any event or environmental circumstance which prompts the hearing impaired child to communicate. Examples might include: a child wanting to relate to a friend something he has seen on television, his wishing to express an emotion or state of being, his being expected to respond to a parent's question or to imitate verbal behavior emitted by his teacher.

The response (R) is the means by which the child attempts to satisfy his drive to communicate. He may attempt communication by: talking, fingerspelling, signing, gesturing, using his body language, or any combination of these plus any additional means of conveying his message.

The event which immediately follows this response (S^+ or S^-) is crucial to the future probability of the child emitting the same means of communicating in the future. If a child points to the cookie jar and is given a cookie, then we can expect pointing behavior to increase when a cookie is desired because that response was reinforced. On the other hand, if pointing does not result in a cookie, but saying, "Mom, can I have a cookie?" does, then a speech response to the desire to communicate will increase.

The teacher, parent, or receiver of the message is the one who provides the S^+ or S^- in the communication act. They continually build the reinforcement or punishment history of the child's communication attempts.

At this point we must re-establish that intelligible speech is our anticipated goal and that reinforced behaviors will increase while punished behaviors will decrease. A behavior must be emitted if it is to be reinforced. If speech is not used it cannot be reinforced and therefore will not increase as a means of communicating. Let us now apply theory to the communication behavior of hearing impaired children.

First of all, an environment conducive to communicate must be established. The teacher and parent should work together to provide the child functional and meaningful opportunities to communicate with family members, school personnel, friends, and neighbors. This can be done by incorporating into the curriculum expressive need phrases or sentences, supplemental St. Joseph Patterns (Buckler, 1968), and expanding expressive language.

Once a communicating environment is established the child will communicate (R) and he will choose or be taught the means (R) of communicating. For the advocate of the auditory-oral approach, this response is speech. For the total communication advocate, this response is a combination of manual means and speech.

Immediately following the child's communication attempt the listener emits a consequence (S^+ or S^-). If the message is communicated to another the means (R) has been reinforced, and, if systematically reinforced, the probability of the child using this means in future communication attempts is increased. Conversely, if the (R) has been punished in that communication did not occur, and, if systematically punished in future attempts, the probability of the child using this means to communicate will decrease.

The implications of this theory provide some definite direction for educators and parents whatever their philosophical biases may be. Those who advocate an auditory-oral approach must: (a) create an environment conducive to communicating; (b) teach the children to communicate by speaking; and (c) systematically reinforce appropriate speech behavior. Appropriate speech behavior must be determined by the teacher and parent because each child functions at a different level of competency.

Those who advocate a total communication approach must: (a) create an environment conducive to communicating; (b) teach the child to respond by talking while using manual means; and (c) systematically reinforce appropriate speech behavior.

It is important for the total communication advocate to reinforce speech because he has two properties of the response (speech and manual) to be consequented. If the child learns that the manual property of the response is more reinforcing than the verbal property, then the manual means will increase while the verbal means will decrease. This is evident while observing deaf persons communicating. The manual means is very evident while few if any verbal responses are being emitted. And accordingly to Dalgleish (1974), manual means of communicating is preferred by the deaf population.

Behaviorally, advocates of total communication who believe that their methods will lead to a maintenance or an increase in speech behavior, but who do not systematically expect, teach, and reinforce speech behavior will be greatly mistaken. What will undoubtedly happen is an increase in manual behavior with a decrease in speech behavior.

On the other hand, advocates of an auditory-oral philosophy who believe that their approach will lead to an increase in intelligible speech, but who do not systematically expect, teach, and reinforce speech behavior so that the child learns that speech is a reinforcing means of communicating will also be greatly mistaken. What will probably happen is a decrease in speech behavior and an increase in gestural or manual behavior.

If speech as a means of satisfying the drive to communicate is a goal for the educator and parent, the child whether in an auditory-oral or a total communication program must talk and be systematically reinforced for talking so that he learns that talking is an effective means of communicating with persons who have learned to convey messages with speech.

REFERENCES

Buckler, Sister Marie Suzanne. Expanding language through patterning. *The Volta Review*, 70, 1968, pp. 89-96.

Dalgleish, Barrie. Communication preference and the social conditions of language learning in the deaf. *American Annals of the Deaf*, 120, #1, 1975, pp. 70-77.

Hall, R. Vance. *Managing Behavior, Book 2*. Kansas City, Kansas. H and H Enterprises, Inc., 1971.

Mindel, Eugene D., and Vernon, Macay. *They Grow in Silence*. Silver Spring, Maryland, National Association of the Deaf, 1971.

PLANNING AND IMPLEMENTING A TOTAL COMMUNICATION PROGRAM

Sr. Joanne Feulner, M.A., St. Francis de Sales School for the Deaf,
Brooklyn, N.Y.

Communication is a process which involves the entire human person and is fundamental to normal human development. Deaf children achieve, learn, contribute and succeed on the basis of their ability to interact meaningfully with other persons. Communication skills . . . language skills evolve and expand through usage. None of us learn language by being taught language. We, instead, learn language by freely using it with our peers, by experimenting with it and by measuring it against that of our adult models . . . our parents. Now, how much language can young profoundly deaf children be expected to learn from each other when their communication efforts are limited to speech and speechreading?

Total communication is the right of a deaf child to learn to use all forms of communication available to develop language competence at the earliest possible age. This implies an introduction to a reliable receptive—expressive symbol system in the preschool years between ages one and five. Total communication includes the full spectrum of language modes—child devised gestures, formal sign language, speech, speechreading, fingerspelling, reading and writing.

The primary aim in the education of the deaf should be the establishment of language knowledge and the effective ways of teaching language and communication to these children.

With concern regarding present methodology, and our desire to be of greater assistance in the education of our children, we began a systematic study of total communication. The remainder of this presentation will deal with all the steps our faculty dealt with to reach the present point.

Since the faculty was most interested in the concept of total communication yet had reservations, it was felt that we should undertake a thorough study of T.C. We didn't just want to jump on any "band wagon".

1. A study group was formed of volunteer members of the faculty. This initial group was to spend an entire weekend in an orientation workshop on total communication. It was hoped that we could glean much valuable information. The weekend consisted of presentations regarding the research in total communication; investigations of teachers and staff and parents; and a definition of total communication as the giving of all forms of communicating to the deaf child—e.g., speech, lip reading, signs, finger spelling, visual aids, gestures, written materials. Time was allotted to a sharing of readings and discussion of philosophy. The group benefited a great deal from the total immersion.

The following week, a faculty meeting was conducted to acquaint the entire staff with all the information gained from the study weekend.

2. Throughout the following two months intense departmental and inter-departmental meetings were held. Many suggestions, questions and concerns regarding total communication were expressed and considered. This allowed for open discussion in smaller groups. Some of the suggestions that were expressed were: (1) Speakers regarding all points of view. (2) Necessity of training all personnel. (3) Presentation to parents. (4) Research studies on total communication.

Some of the questions that were raised as part of these discussions were: (1) If signs are introduced at preschool level, will there be any effect on speech reading skills? (2) Will total communication facilitate language development? (3) If adapted, on what level would implementation be inaugurated?

3. At the general meeting of the entire educational staff in January a proposal was presented to the group—its purpose—to begin a systemized study of total communication at St. Francis de Sales.

The proposal included the establishment of a steering committee which would have as its function: (1) To examine goals. (2) Gather and disseminate information to and from the staff regarding methods of communication. (3) To guide and plan procedures such as panels, questionnaires, sectional and departmental meetings and to establish committees as they see the need regarding total communication.

The proposal was accepted unanimously and members of the steering committee were elected from various departments within the school.

The steering committee consisted of nine members, six elected and three appointed. This committee would meet on a weekly basis trying to work through the objectives of the group.

When the proposal was made that a steering committee be formed, the objectives or function of that committee had as its main function to examine goals (what we would see as our goal if total communication were adopted as a method in St. Francis de Sales). The goals were established: (1) Improve receptive and expressive language acquisition. (2) Enhance understanding and communication between parent and child and teacher and child. (3) Reduce the frustrations of the non-oral child without sacrificing the potentially oral child.

There would be a continuation of emphasis on speech development in both classroom and individual instruction.

4. Committees were established with a person from the steering committee serving as a chairman and volunteers from the faculty. The committees were: (1) Research; (2) Parent; (3) Speakers, and (4) Resource group.

The purpose of the committees were:

1. *Research.*—To prepare a bibliography on total communication as well as abstracts of articles and studies. To reproduce research findings done by other schools using total communication. To provide information to the staff which would assist them in coming to a decision.

2. *Parent.*—To provide information to parents regarding methods of teaching and opportunities for parents to express ideas and be informed. A questionnaire was sent to the parents regarding their opinions of communication.

3. *Speakers.*—To contact speakers who would be knowledgeable in specific methods of communication. To provide films and videotapes which would in any way inform staff and parents with the necessary information that would assist them in making a decision.

4. *Resource.*—To make decisions regarding what signs would be taught. A file on the "agreed sign" would be inaugurated. (This committee began its work much later and is still functioning).

A suggestion box was made available so that any faculty member might suggest business to be discussed by the steering committee. Various sessions of the steering committee were videotaped and played for the entire faculty during the week.

The following were some speakers who addressed the faculty and parents at different sessions: Claudia Harrigan—Director of Educational Services of the New York League for the Hard of Hearing; Jim Strangerone—N.T.I.D.; George Fellendorf—Editor of the Volta Panel of Deaf Adults; Suzanna Baltzer—Gallaudet Preschool.

The research committee contributed several reviews, essays, and studies in addition to an annotated bibliography. It was the unanimous opinion of the committee that T.C. be adopted by St. Francis de Sales. If T.C. is employed, it was recommended that an ongoing study be employed regarding the behavioral learning of the children. The aims of this ongoing study would be to recommend adjustments in the implementation of T.C. as they become apparent. The research for these studies will be designed on the basis of concrete questions coming from the teaching situation.

The parent committee prepared a questionnaire to be completed by the parents. Seventy-five percent of the total school responded to the questionnaire. The parents were invited to open discussion meetings was well as formal presentations.

A questionnaire was presented to the staff. This includes such questions as:

1. Do you feel you have enough information on total communication?
2. How do you feel about implementing this method on your level?
3. Do you have suggestions for implementation?
4. Do you have any comments regarding parents?
5. Since a majority of the staff felt they had enough information regarding total communication, a vote was taken on May 31st—Do you WISH TO SEE TOTAL COMMUNICATION IMPLEMENTED AT ST. FRANCIS DE SALES? It was a majority decision in the affirmative.

The steering committee having completed its work was dissolved. Only the resource group would continue at this point.

6. A summer project was inaugurated to instruct the faculty in total communication. Carol Tipton set the tone for the project by discussing "The Philosophy of Total Communication".

Each member of the staff took a pre-test which divided them into the following groups: advanced, intermediate, beginners. An hour each day was spent in the following curriculum: new vocabulary, sentence and paragraph drill, and related activities. The use of "Fingerspelling cartridges" and videotapes added to receptive and expressive skills.

During the sessions, Dr. Stokoe addressed the faculty on the "Linguistics of Sign Language and Total Communication". A seminar was also planned with the following panelists:

Communication skills as viewed by:

Parent.—Doris Naiman, Ph. D., Director of Training Deafness Research Center at N.Y.U.

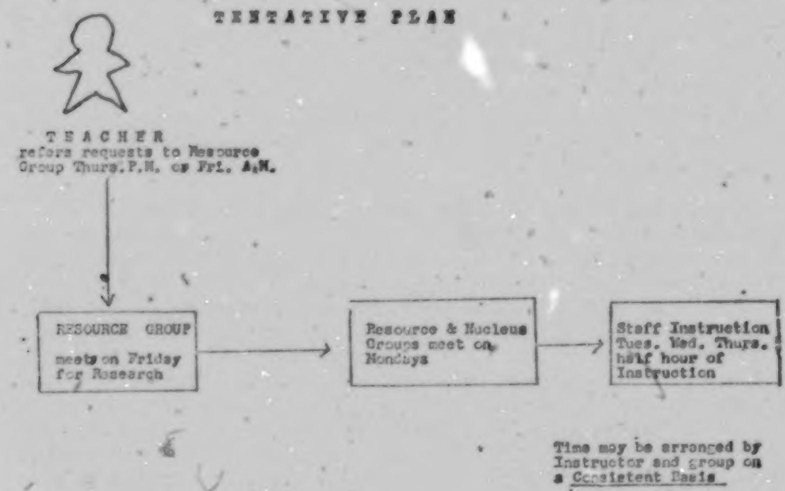
Psychologist.—Allen Sussman—Coordinator, Mental Health Program, Maimonides.

Research.—Jerome Schein. Ph. D., Director of the Deafness Research and Training Center at N.Y.U.

There was ample time for questions and answers.

The last day was a sign marathon—All groups participated in a day of activities and games concluding with a sign talent show.

7. In September, 1972, a tentative plan of continuing instruction was presented to the faculty. A synopsis follows.


TENTATIVE PLAN
TEACHER
refers requests to Resource Group Thurs. P.M. or Fri. A.M.
RESOURCE GROUP
meets on Friday for Research
Resource & Nucleus Groups meet on Mondays
Staff Instruction Tues. Wed. Thurs. half hour of Instruction
Time may be arranged by Instructor and group on a Consistent Basis

Time may be arranged by instructor and group on a consistent basis.

A nucleus group was formed of those who would instruct the faculty. This plan was accepted by the faculty and was in process the entire 1972–73 school year. We arranged with New York University for a consultant to assist the resource group. Martin Sternberg met with the group on a monthly basis. The resource file was inaugurated which includes—word—source from where the sign was taken; and a picture or description of the sign.

In November of 1972 the resource group presented to the faculty three dates from implementing total communication with the children. December, 1972, January, 1973, September, 1973. Total communication would be used during a minimum of one well prepared lesson each day. More than one lesson per day may be taught in total communication, but the lesson must be in complete total communication. The date which received the majority vote was January, 1973.

In September 1973, the faculty used total communication for the entire day. The resource group still functioned on a weekly basis. This year Carol Tipton from NYU served as a consultant to the resource group. The nucleus group met with the resource group on Tuesdays and the faculty received continual instruction twice a week. There were scheduled meetings of the entire faculty with the resource group throughout the year trying to solve problems as they arose.

In September, 1974, the resource group met weekly and the faculty received instruction once a month for 1½ hours. Vocabulary needs are still presented to the resource group who consults with Carol Tipton.

The teachers meet to discuss goals of total communication and the progress of the children. The meetings are departmental, inter-departmental as well as the entire faculty.

For the past three years there has been concurrent instruction for parents once a week for ten week segments. All parents are strongly urged to participate.

PUBLIC SPEAKING THROUGH TOTAL COMMUNICATION

Shirley P. Stein, Associate Professor, Rosemary D. Weller, Assistant Professor, Department of Audiology and Speech, Gallaudet College, Washington, D.C.

Simultaneous communication has long been the accepted mode of teaching at Gallaudet College. It simultaneously incorporates the use of the spoken word, signing, and fingerspelling. Simultaneous, or Total communication, is the standard policy of the College community.

The Department of Audiology and Speech was established in 1957. The program offered by it has evolved from a strictly clinical service, therapeutic and research oriented program to one which now also offers academic courses in communication and audiology on both the undergraduate and graduate levels. Each student's communication skills are assessed in the areas of lipreading—without and with sound—speech, and hearing. A rating is ascribed on a one to five scale, with one indicating the greatest proficiency and five the lowest proficiency. Thus a communication profile is determined. Procedures are currently being devised to test each student's ability in manual communication and in total communication. The profile, when those ratings are added, will give a rather complete picture of each student's receptive and expressive communication skills.

All undergraduate students are required to complete a three-course sequence plus one elective before graduating. The third course in the sequence is public speaking. Standard college texts are used. A variety of assignments deal with the selection and organization of ideas and their effective presentation to numerous types of audiences.

An important aspect that is stressed is peer-group evaluation of the content and the delivery of the presentation. One rationale is that it is good "to see ourselves as others see us." Another, of course, is the importance of developing the ability to analyze the relative effectiveness of ideas and the manner in which they are expressed. That is an important quality if we in a democracy are to accept our responsibilities with seriousness. Then, too, most of us spend more of our lives "listening" to speeches than being public speakers.

The speakers shown in this videotaped presentation reflect diverse educational backgrounds, as does the total Gallaudet population. They have been educated in residential schools, special day classes and schools, and in regular public schools for hearing students. Even as classes in the college represent a cross-section of its heterogeneous population, the videotape shows performances of students with different degrees of hearing impairment, different ages of onset of hearing loss, and different kinds of family backgrounds—including deaf and

NOTE.—This paper was delivered to the CAID in combination with a videotaped presentation. This videotape was filmed in a public-speaking class at Gallaudet College, and depicted deaf students addressing to their class short autobiographies using total communication. However obvious technical difficulties prevent the inclusion of the videotape, and only the written format can be presented.

hearing parents and/or siblings. In addition, the tape clearly shows different levels of competence in oral skills, in manual communication as well as in total communication.

There is an important factor in the rationale for teaching public speaking through total communication to groups of students with such varied backgrounds and communication skills. Although it is likely that ultimately these students will work and have some association with hearing people, it is also likely that they will socialize and have even greater association with hearing impaired people. College is a place where young adults are introduced to new ideas. Effective exchange of ideas depends on effective communication. It is also a place where people meet others of similar and divergent interests and backgrounds. In order to relate to and enjoy associations with people of such diversity there is need for effective communication. We think total communication can be the mode.

We have chosen to show on videotape what in public speaking courses is usually the topic assigned for a first speech: My Autobiography or An Important Influence on My Life. It is easier to speak about a topic with which one has great familiarity. What, then, is one better qualified to talk about than oneself? The things a person says about himself frequently reflect his self-concept and give the casual listener basic information and the attentive listener remarkable insights. In each instance the speaker is making his first presentation in the course. It is not a polished speech nor is he an adept public speaker. Some have good oral speech, some have good manual skill, some have good total communication. Some have less than good in each. Nonetheless, all are using total communication and all can be understood by an audience with equal, poorer, or better receptive skills in each area than the speaker has.

The first young man, who uses a hearing aid and has 26% speech discrimination, attended a school for the hearing for eight years, a school for the deaf for four years, and four different colleges. His oral speech is good, his total communication fairly good, but you cannot miss his self-concept of being an "All-American boy."

The second speaker, who has a 98dB threshold in her better ear, has no measurable discrimination and wears an aid, claims that because her father was in the Air Corps she "had no hometown until I was ten." Although she has younger siblings with hearing losses, you hear and see her say, "Gallaudet was my first experience with the deaf. It was the first time I felt accepted for what I am." Her sign language is not really smooth, but she is definitely using total communication. She has been using it for only a short time. It is slow but because of her oral speech (and your lipreading ability) she is easily understood.

Interestingly, the third speaker, who has a threshold of 100dB and is a confirmed hearing aid user, also has two younger siblings with hearing losses. He contends that he had no idea about sign language before he came to Gallaudet. For a young man whose "hobby is girl watching" it is obvious that the forty five stitches he had in his head have neither affected his brain nor his sense of humor. It is interesting to note that he did not label himself either deaf or hard of hearing but only that he "lost his hearing" at age four and a half.

The next speaker who uses her hearing aid constantly despite her 95dB threshold and no discrimination "was born in Normal, Illinois and must therefore lead a normal life." Neither her speech nor her signs are perfect but her total communication is readily comprehended.

The fifth presentation is by a young man with a threshold of 108dB and no hearing aid. He is quite correct when he says he has "almost 100% deafness." Although he says he misses class sometimes because he likes to sleep, he puts in a plug for our department when he contends "anyone can speak." He is not exactly an accomplished oral or manual public speaker, but in his casual manner, through his use of total communication one skills reinforces another.

The next speaker, despite a threshold of 100 + dB, no hearing aid, and a very high pitched, difficult-to-understand voice, has been educated and has associated with deaf and hearing students. His having been in the movies and on TV reveal, through total communication, that there are advantages in living in Hollywood!

The seventh student on the tape has a 72dB threshold, 24% discrimination, a hearing aid, eight siblings, three of whom have hearing losses, and twelve step-siblings. The fact that his family first learned of a school for the deaf when he was 12, points to the need, in certain geographic areas, for early detection and school placement of hearing impaired children.

The last speaker has a threshold of 75dB, a hearing aid and 80% discrimination. He has a childhood history of having returned to regular public schools after a stint in a school for the deaf—during which time his hearing had improved. He is an older student, having been a printer for 23 years. He relates remarkably well with his much younger fellow-students and exercises good influence on them. His lingering southern accent is not reflected in his signs but he combines them smoothly in total communication and his humor surely comes through.

Tapes of student presentation are made for self-improvement and teaching purposes. Students have the opportunity to see themselves, a thing which most of us rarely do. New students in the public speaking course have the opportunity to witness and evaluate different kinds of speeches before they are required to make one of each particular type themselves. Your opportunity to see this tape is in a sense a bonus byproduct of videotaping.

Each of the students you have seen could probably make himself understood to a particular select audience in a presentation mode of his preference. All of them, through total communication, are able to make themselves understood to a wider, more hetergeneous severely and profoundly hearing impaired people who comprise the student population at Gallaudet College.

Tuesday, June 24, 1975

TOPIC: The Learners: Their Needs

THE APPLE TREE LANGUAGE PROGRAM

Janis Caniglia, Norma Jean Cole, Marcia Rice, Wyman Howard, Emmylou Krohn, Iowa School for the Deaf, Council Bluffs, Iowa

"APPLE TREE" may be a strange name for a language program, but the name is an acronym for "A Patterned Program of Linguistic Expansions Through Reinforced Experiences and Evaluations."

APPLE TREE is a language program designed for the hearing impaired. It was created and developed by classroom teachers from classroom experiences, to be used in the classroom to meet language needs of hearing impaired children. It can be used by others with language deficiency.

APPLE TREE is a language system that provides sequential procedures for the construction and development of basic sentence structures that are the foundation of English language.

This outline presents the main features of APPLE TREE. The combination of these features makes the program a practical teaching and learning tool.

FEATURES OF THE APPLE TREE LANGUAGE PROGRAM

I. Structural linguistics
II. Sequencing of sentence structures
III. Spiraling sequence of language concepts
IV. Five teaching strategies
    1. Comprehension
    2. Manipulation
    3. Substitution
    4. Transformations
    5. Production.
V. Question transformations
VI. Experiences
VII. Expansions
VIII. Evaluations

A closer look at each of these features will give a brief overview of the APPLE TREE language program.

I. STRUCTURAL LINGUISTICS

APPLE TREE is based on structural linguistics in a simplified and modified form. Structural linguistics capitalizes on the regularities that are found in the English language. It is rather a forbidding term, but through structural linguistics the student learns that certain words regularly go into specific segments or slots of a sentence and do not fit into other positions. In addition to this order or structure the student learns that some words have certain types of endings, forms, or signals; others do not.

Through linguistics, too, they learn that certain types of words give information and other types of words build the framework of the structure.

APPLE TREE is founded on 5 basic sentence structures and 5 expansions of those basics into a total of 10 developmental instructional units. These units offer the fundamental language forms upon which our daily language is built.

II. SEQUENCING OF SENTENCE STRUCTURES

Much of the language material we meet today becomes more of a corrective device than a developmental teaching process. Deaf students need more than a correction of the language they have; they need an input of language they do not yet have.

APPLE TREE is designed as a progressive program, teaching the child to construct language one step at a time. The 10 units are presented in a logical sequence with each step building on what is previously learned.

Instructional units of the apple tree program:

1. $N_1 + V_{be} +$ Adjective
2. $N_1 + V_{be} +$ Where
3. $N_1 + V_{be} + N_1$
4. $N_1 + V$
5. $N_1 + V +$ Where
6. $N_1 + V +$ Where $+$ When
7. $N_1 + V + N_2$
8. $N_1 + V + N_2 +$ Where
9. $N_1 + V + N_2 +$ Where $+$ When
10. $N_1 + V + N_3 + N_2$

It may look confusing at first to the uninitiated, but it is language in a very simplified form. Let's focus in on the structures to understand the symbols and follow the progressive building process and the rationale of the sequence. Each structure allows for review of material previously introduced and for development of new vocabulary and related concepts.

1. $N_1 + V_{be} +$ Adjective

The N_1 is the subject part of the sentence. It is not a noun as a part of speech, but is one part or slot of the structure.

V_{be} indicates the "be" verbs (am, is, are, was, were-)

Adjective (Adj.) is another segment of the structure. It is also the adjective part of speech. Example: The boy is tall.

2. $N_1 + V_{be} +$ Where

The N_1 and the V_{be} portions have previously been taught. WHERE is the new concept to be learned. Example: The dog is under my bed.

3. $N_1 + V_{be} + N_1$

Again we are building on what the child already knows. The second N_1 is a symbol for the predicate nominative. The same N_1 symbol provides a visual clue to help the child understand the words used in the two positions must relate to each other in both number and meaning.

This structure offers opportunity for classifying and grouping like ideas.

Example: My name is Tommy Allen
My favorite food is Southern fried chicken.

4. $N_1 + V$

The first three structures were built on the "be" verbs. Other verbs are introduced in this structure through the use of the modal can. Then the present progressive and the past tenses are developed.

Example: Mary can run.
Mary is running.
Mary ran.

5. N_1+V+Where

This is an expansion of the N_1+V pattern. To this the child can add where thoughts he has previously developed in pattern 2, and can add new experiences to include prepositions of movement. New language principles are continually introduced and developed within each structure.

Example: The lions are going into the cave.
We can play in the gym.

6. N_1+V+Where$+$When

Adding a when phrase necessitates not only learning expressions for time, but the child must correlate it with verb forms.

Example: I went to the movies last night.
My grandmother goes to Florida every winter.

7. N_1+V+N_2

Here, the N_2 is the new factor. This symbol indicates the direct object. The symbol N_2 offers the student a visual clue that this segment does not need to match the initial N_1 in number and meaning.

Example: The boys ate the pie.
I want to get a drink of water.

8. N_1+V+N_2+Where

Spiraling back the student draws on concepts already learned and puts them into a new structure form, expanding his ability to express language.

Example: Tom found a quarter in the back yard.
I will meet my father at the airport.

9. N_1+V+N_2+Where$+$When

Building and expanding, the child acquires another vehicle for verbalizing. New vocabulary can be added, but should always be presented in familiar structures. Familiar vocabulary should be used in building new structures.

Example: Tom found a quarter in the back yard last night.
I will meet my father at the airport at 3:15 on Saturday.

10. $N_1+V+N_3+N_2$

This structure is another expansion of the N_1+V+N_2 pattern through the transformations of addition and rearrangement. This structure can also be expanded with the addition of a where thought, a when thought, or with both.

Example: John gave me a kiss.
John gave me a kiss last night.
John gave me a kiss on the back porch last night.

These are the 10 teaching units of the APPLE TREE program as they are presented. The sequence builds progressively and spirals back to use what is already known.

III. SPIRALING SEQUENCE OF LANGUAGE CONCEPTS.

APPLE TREE goes one step farther. Not only are the structures presented in a logical sequence, but the language principles, such as case pronouns or verb tenses are introduced one new concept at a time. The student works from the known into the unknown. This gives the child a degree of security and a greater possibility of achievement.

IV. TEACHING STRATEGIES

APPLE TREE presents language concepts and structure development through 5 teaching strategies. The first three: (1) Comprehension, (2) Manipulation, (3) Substitution are designed to give the child language input.

Comprehension is a process for developing the child's understanding of vocabulary, concepts, and forms of structure. A child cannot put a written word into a correct structure, nor decode an understanding from words in a structure if the written symbols mean nothing to him nor relate to his own experiences.

Manipulation is a procedure to help the child understand the structure of language. By manipulating word cards the child discovers some types of words go into certain slots or positions in a sentence, and not in others.

N_1	V_{be}	Adj.
The pencil	is	red.

Manipulating sentence patterns lets the student gain experience with the written language without all the concerns of writing as penmanship, muscle coordination, punctuation, capitalization, etc.

Substitution is a teaching strategy that provides a model of structure and allows the student opportunity to express many ideas within that structure. By using only one variable at a time in the pattern the child can feel security in forming more and more sentences.

Example:

N_1	V_{be}	Adj.
What	is	red?
The pencil	is	red.
The ball	is	red.

Each time a new sentence is manipulated or a substitution is made it gives added visual input for language reinforcement.

In APPLE TREE the teacher doesn't spend time telling the class about language principles or grammatical rules, but provides models of structures and gives ample opportunity to visualize and internalize that written model by repeated practice through various experiences and activities. Give sufficient time for the input period of learning.

Transformations is another teaching strategy of APPLE TREE. A transformation is the alteration of a basic sentence pattern. The APPLE TREE program does not concern itself with all the possible transformations that can be made on a kernel sentence, however three types of transformations are essential to the instructional units.

1. Substitution is replacing words in one segment of a structure with other words.

Example: *What* is flat? *The tire* is flat.

2. Addition is adding something to a kernel sentence.

Mary played. Mary played *in the gym.*
or
Tom is tall. Tom is *not* tall.

3. Rearrangement is shifting one segment to another position in the sentence.

John *is* happy. *Is* John happy?

Production is the fifth teaching strategy. Production, of course, is not unique only to APPLE TREE, but APPLE TREE is careful not to expect too much too soon. Production is the child's ability to use the structure spontaneously, on his own or with motivation.

V. QUESTION TRANSFORMATIONS

APPLE TREE places great importance on teaching the child to both interpret questions and to formulate them on his own. When the student understands that the question form is only a transformation of a basic structure, the problems are minimized. Question forms related to each structure are developed within that unit.

Who/What question forms are made by a simple substitution process.

What is round?
Who is behind the door?
What is your name?
Who went to town yesterday?
What do you want to eat?

Once the process of substitution of a question word (who/what) in the N_1 position is learned in the first structure, the same principle applies to each new structure.

The child has security in repeating a concept learned.

The Yes/No question form is very important. Not only does it give the positive or negative information, but it is the foundation for making basic Where and When question, too. Again, the language has regularities upon which the child can build.

Is the ball red?
Is Tom in his room?
Is your father a doctor?
Can Mary swim?
Is our team winning?
Will Mary leave tomorrow?

In the "be" verb structures, the yes/no questions are formed by moving the "be" verb to the front to form the question word.

With a two part verb the child learns that the first word in a verb cluster moves to the frontal position to make a yes/no question form.

The student can use these same concepts in forming question in each structure as he progresses through the system.

Past tense verb forms need extra attention. In forming questions with past tenses, such as—*Joe walked*, the system remains stable, but the student needs help in understanding how the concept still applies.

JOE *WALKED.*

DID WALK

JOE DID WALK.

DID JOE WALK?

JOE DID *NOT* WALK.

By introducing regular verbs first, the student can visualize the past tense form *walked* is actually *did walk.*

It is now a two part verb and the previously learned concepts apply. Move the first part of the verb to the front position to form a yes/no question.

The *did walk* is also needed for the negative.

VI. EXPERIENCES

The APPLE TREE manual provides teaching techniques, activities, and student involvements designed to give the teacher ideas for introducing, developing, and reinforcing each language concept. APPLE TREE work books present student materials supplementing the program.

VII. EXPANSIONS

APPLE TREE presents language construction and development through 5 basic patterns. The instructional units provide strategies for 5 expansions for these basics. The fundamental structures are essential before more complex structures can be successfully used. The manual does give ideas for developing more complex and expressive sentences through other transformations and expansions.

VIII. EVALUATIONS

Throughout the program there are concept evaluations that assist the teacher in checking the student's comprehension and usage of each language principle presented.

As part of the total language program, pre and post tests are available. These are written behaviorally, and when administered at the beginning of the year and at the close, can indicate language progress and point to specific strengths or weaknesses for the individual student.

This has been a very brief overview of the main features of the APPLE TREE language program. The program gives the language deficient child a learning process for constructing and developing language. This is done within a structured system that presents language concepts in a sequential, spiraling progression with opportunity for continual reinforcement and evaluation.

Too often we expect our youngsters to write before we give them the proper tool with which to produce. We feel APPLE TREE can be that tool for the hearing impaired child.

JOE *RAN.*

DID RUN

JOE DID RUN.

DID JOE RUN?

When the child has ample experience using the regular verbs, the same concept can be applied to the irregular verb forms in making the yes/no question.

The question forms are part of the structure, and there is regularity in the system of making the transformations.

The YES/NO question forms provide the foundation for making the WHEN and WHERE questions. The unknown segment of the sentence will indicate which question word will precede the yes/no question form.

N_1 V WHERE

JOHN WENT somewhere.

JOHN DID GO somewhere.

DID JOHN GO somewhere?

DID JOHN GO WHERE?

WHERE DID JOHN GO ?

The where thought is the unknown. To ask a where question the child understands that the yes/no formation is made first. Then the unknown (where) is moved to the front position to make the question word.

Capitalization and punctuation should always be part of this learning process.

The same procedure is used in forming when questions. All question forms pertinent to each structure are taught within that unit. The student relates the transformations to the structure and gains security in each concept.

PATTERNED LANGUAGE—A COMPREHENSIVE PROGRAM FOR WRITTEN LANGUAGE

Bill P. Peck, Director, Oregon School for Deaf, Salem, Oreg.

My opening remarks will be very brief because I want to utilize the major portion of the time I have allotted to me today to show you what I consider to be a comprehensive program for helping deaf children develop written language skills.

Time does not permit me to list all of the assumptions upon which this program has been developed; but, I would like to mention several that are key assumptions to help you understand what you will be seeing during the remainder of my presentation. My first assumption is that the printed word as a symbol system is basically no different than any other systematic symbol system in its utilization in the area of communication. My second assumption is that deaf children are highly visually oriented; and, therefore, need a visual self-monitoring system to assist them in their development as they attempt to acquire correct written language skills in much the same manner that we utilize our sound symbol system to monitor ourselves as we acquire and maintain our speaking skills. The third key basic assumption is that deaf children who are visually oriented must have, in the early states of development, a highly visually structured approach to teaching written language skills and gradually move to a less structured approach after some basic skills have been developed. This comprehensive program for helping deaf children acquire written language skills and these basic assumptions have come over a period of 19 years of working with deaf children in the classroom setting. It grew very slowly and very naturally as I and my teaching staff attempted to meet deaf children's written language needs.

When I entered the field of education of the deaf during the 1955–56 school year, and during my period of training, I heard over and over again that we need a comprehensive written language system designed to meet the deaf child's needs. Therefore, in 1957, I resolved that I would attempt to develop that program which appeared to be such a dire need. I was unable to attend a CAID convention until the one in 1959 at the Colorado School for the Deaf. I found again this same topic being discussed over and over again. I left that convention the same as I have left every convention since that time with nothing positive resulting from all the discussion.

I am certain I have developed such a program which contains all the basic assumptions and criteria; and, I would challenge you to take a very close, unbiased, professional look at what you are about to see and determine whether or not you agree that I have accomplished the goal which I attempted to accomplish 18 years ago.

Any good, comprehensive, written language program for deaf children must meet some very basic criteria, and I would like for you to measure the program that you are about to see against these following five basic criteria:

1. It must be developmental in nature and satisfy early childhood education needs.
2. It must be linguistic in nature and should follow a visual transformational grammar approach. (The Patterned Language program accomplishes all that Dr. Heidinger states a written language program for deaf children should accomplish).
3. It must be utilized in a proper developmental sequence to be certain that no significant phases of linguistic phases of development are missed by the child.
4. Consistency in approach is a must throughout the entire school to reduce the confusion as children move from classroom to classroom and teacher to teacher.
5. It must be comprehensive in nature in that it covers all ages from approximately 18 months to two years of age through the remainder of the school year either in a developmental or remedial manner depending upon the child's own individual abilities.

Now I will introduce the three sequential units of material built around a curriculum of terminal objectives. These terminal objectives were spoken of more specifically Monday in a paper presented by Mr. Bill Erickson who has been our Language Coordinator for the past two years at the School for the Deaf in Oregon. He discussed a written language curriculum based upon terminal objectives that was developed over a period of three years by a group of dedicated language teachers at our school. He also describes the materials in our Instructional Materials Center that are coded back to each terminal objective in the curriculum guide. He spoke of the computerized test that provides an individualized printout for each student indicating his areas of weaknesses and, thus, specically providing the teacher with the needs that the students have in the area of written language. And last, he very briefly covers the program of Patterned

Language of which I am now prepared to present to you in greater detail. I will do this through the use of three tape-slide presentations that will cover the three major units of materials. These presentations will cover the goals of the unit, the entry level of performance necessary before entering the unit, the exit level of performance before leaving the unit of materials, and then, a very complete description of the unit itself. Following this audiovisual presentation, I will make available to you some printed material that will outline what you have seen as the printed word system is compared to that of the sound symbol system in the phases of development of communication skills. Instructional manuals have been completed for all three units that assist the teacher in the utilization of the materials in each of the three units. Unfortunately, time will not permit us to either see or discuss those manuals at this time. They include the phases of written language development expected of each child on an individualized basis and the exit level of skill that the learner will have to demonstrate before he can move on to the next phase of development.

UNIT I

This unit is designed to meet the needs of very young deaf children either while they are at home or upon entering school when they become three or four years of age. Its primary function is to help the child acquire a small vocabulary (approximately 12 words) which will be functional and tailor-made for his initial one word (holophrastic) communication needs.

SOUND Symbol System	**PRINTED WORD Symbol System**
Phases of Development of Communication Skills for hearing children	PATTERNED LANGUAGE PROGRAM OF LINGUISTIC MATERIALS
1st Phase The child begins to: a). Attach meaning to the sound symbol (receptively.) b). Gradually receive and respond appropriately to symbols.	***Unit I*** *Goals.*—The goals of this unit are to: (1) help a child acquire a printed word vocabulary, and (2) develop an ability to communicate with it on a one-word (holophrastic) basis. *Entry level of performance.*—(None required). *Exit level of performance.*—The ability to attach meaning to, properly respond to, and communicate basic individual wants and needs with approximately a 12 word vocabulary.

Unit description.—Unit I is designed to help a child (as young as 2 years of age) to attach meaning to the printed words and begin communicating with those words. It can begin initially in the home with the mother who follows a step by step illustrated instructional manual, or it can be introduced when the child first enters school. In either case, it will help him establish immediate, positive printed word communication with his parents (family), teacher, tutor, etc.

The development of a beginning work vocabulary and the ability to communicate with it, is accomplished through the proper use of printed word cards and two Patterned Language aprons. The word cards are color-coded to match the color coding of the apron pockets. The color coding and apron pockets are used to begin to establish the concept of word classification (grouping) and correct word order (syntax).

The instructional manual for this first unit provides for the early introduction of negative (No) and positive (Yes) concepts.

c). Express wants and needs with approximately 6–12 symbols on a holophrastic basis.

Also, on a single word basis, the child will be exposed to (receptively) and learn to use (expressively):

1. names of people and pets—Mama, Daddy, Fido, etc.
2. basic desires and activities—want, eat, drink, sleep, etc.
3. names of objects (things)—cookie, juice, doll, truck, etc.
4. where concepts—bye-bye, bathroom, outside, etc.
5. time concepts (relative)—afterwhile, before, etc.

The child acquires the ability to use these word-concepts while he is involved in the communication process. This communication revolves around natural language learning situations which exist in his everyday environment rather than from rote or stilted activities. The topics of communication must center around the people, pets, activities, objects, and places which are important (relevant) to the child. This, of course, provides the child with immediate pay-offs and increases his desire to communicate.

Proper utilization of this first unit can also permit the introduction of the question concept. Since all communication revolves around the telling or asking process, a child must acquire the ability to distinguish between and successfully use both processes.

UNIT II

Now that the child has acquired approximately a dozen words of functional vocabulary, he is ready to begin entering the second unit of materials. The teacher will structure the room environment with the materials in such a way that he will begin to have to work with two word word-strings and move to three and four word word-strings and eventually full sentence patterns. Also, this second unit of material allows the learner to begin experiencing some basics in the area of transforming basic sentence patterns into sentence transforms of more complex nature. You will see this unfold as we progress through this next set of slides and the tape presentation.

Since the children work on a more or less individualized basis, some may still be working with two and three word word-strings while others have progressed to longer word-strings or even to full sentence patterns in order to get what they want, go where they would like to go, or do what they would like to do within the classroom environment.

From a developmental standpoint, children this age are very self centered and are constantly wanting something for themselves; so, this second unit begins by utilizing this as a means of motivation so that they may have what they want, go where they need to go, or do what they would like to do. The concepts learned during this period of time can be easily reinforced in the home; or, if the child lives in a residential school, can also be reinforced in a dormitory setting.

Also, in this second unit of material, if the child has a desire, he is encouraged but not required to begin copying some of his functional printed word vocabulary. This is done through the utilization of some elliptical sentences in preparation for the third unit of material which does require the ability to write from memory word strings and sentence patterns.

SOUND Symbol System	PRINTED WORD SYMBOL SYSTEM
Phases of Development of Communication Skills for hearing children.	PATTERNED LANGUAGE PROGRAM OF LINGUISTIC MATERIALS
2nd Phase Soon after the first phase of development, the child: *a.* Will begin to use a pivot symbol and the second symbol together in a 2 word string. *b.* Will string 3, 4, etc., symbols together into word strings.	*Unit II* *Goals.*—The goals of this unit are to: (1) help a child acquire the ability to use his one-word vocabulary to communicate with 2 word, 3 word, etc., strings, then (2) help him expand those word-strings into full sentence communication, and (3) encourage (but not require) the child to begin copying some of his functional printed word vocabulary. *Entry level of performance.*—The child must have approximately a 12 word functional vocabulary including several word groups (subject, verb, object, where, when). *Exit level of performance.*—The child can begin exiting this unit when he demonstrates the ability to copy (manuscript sentences of 4 words in length) and write (manuscript) from memory 50% of his functional vocabulary. *Unit description.*—After the child has attached meaning to the printed word (cards), has a beginning working vocabulary of approximately 12 words, and is communicating with those words, he is ready to begin working with Unit II. The child continues to work with Unit I to acquire new word-concepts but gradually begins to work toward the objectives of Unit II.
3rd Phase The child: *a.* Will begin gradually to use two or more symbols in proper sentence forms.	The main objective of Unit II is to help the child who has a beginning working vocabulary to begin putting those words together in their proper order (syntax) and relationship (semantics). A secondary objective is to begin introducing the (4) basic sentence patterns around which the remaining materials revolve. After each new word is introduced to the child through Unit I and acquired by him, the color-coded cards are placed in color-coded card files. The card files sit in a metal tray in front of and below a slot chart. This arrangement permits the parent, teacher, or tutor and the child to build sentences one word at a time from the card files to the slot charts above. The individual card files provide maximum flexibility so any sentence pattern desired can be generated. Very shortly after the child begins to properly utilize the Patterned Language slot chart, he is introduced to his own small color-coded word-tray. The word-tray permits the child to begin using the small word-cards from his language apron to build syntactical word strings.
4th Phase The child: *a.* Will generate sentence transforms from basic sentence patterns.	The flexibility of this second unit, the word-cards and card files, permits the teacher to begin laying ground work for sentence transforms. This of course includes continued work with the question form through the manipulation of word-cards and card files. The teacher begins receptively to work with sentence transforms and continues to build them around everyday activities. Gradually the child is expected to become more involved responsively then expressively in the communication process through the use of more difficult sentence patterns.

UNIT III

Children who enter Unit III are approximately six to seven years of age. However, before they are allowed to begin utilizing the third unit of materials, they must be able to copy about 50 percent of their functional printed word vocabulary and write 50 percent of that same functional printed word vocabulary from memory using manuscript printing. Even though the children are working more in group settings, they are still able to progress on an individualized basis through the phases of development that are presented in the Curriculum Guide.

There will be some individualized work involved; but, for the most part, it will be in group sessions and utilizing the blackboard with the word reference symbols above the blackboard for visual self-monitoring cues. While the teacher is working with one child at the blackboard, the other children are expected to be working with the same sentence pattern at their desk. As the children become older and move into upper primary and lower intermediate department, they will begin to utilize the wall chart sections that hang above the blackboard. The teacher will use these wall chart sections to begin patterning the exact sentence she wants the children to write depending upon the stimulus or stimuli that she has utilized to motivate their writing.

SOUND Symbol System

Phases of Development of Communication Skills for hearing children.

PRINTED WORD Symbol System

PATTERNED LANGUAGE PROGRAM OF LINGUISTIC MATERIALS

5th Phase

The child enters school (age 6–7) and is exposed formally and systematically to the alphabet and reading/writing skills. He is being asked to transfer his sound symbol system to that of the *printed word.*

Unit III

Goals.—The goals of this third unit are to help a child: (1) acquire all of his functional "printed word" vocabulary, (2) utilize that vocabulary in (4) basic sentence patterns, and (3) develop the ability to transform those basic sentence patterns into more difficult sentence patterns, (sentence transformations).

Entry level of performance.—The child should have the ability to copy (from memory) approximately 50 percent and write 50 percent of his functional "printed word" vocabulary using manuscript printing.

Exit level of performance.—The child can exit this unit of material when he demonstrates the ability to: (1) utilize his functional "printed word: vocabulary in the (4) basic sentence patterns with 30% syntactic accuracy. (These sentences should pertain to everyday events that are of significant importance to the child.), and (2) generate sentence transforms from the basic sentence patterns.

Unit description.—This third unit is built around a wall chart that hangs above the backboard. The chart is divided into 8 sentence areas:

1. Sentence Transforms
2. Subject+Modifiers
3. Verb+Direct Modifier
4. Object+Modifiers
5. Where
6. When
7. Conjunction
8. End of Sentence Punctuation

Each area has 1 to 3 sections that hang from a "V" shaped rail. The various sections are placed in different arrangements along the rail to construct basic sentence patterns. From the basic sentence patterns the various sentence transforms are generated by using the Sentence Transforms section.

In the beginning the wall chart sections are positioned to correspond with the card files in Unit II so basic sentence patterns can be consistently presented. Then the child is gradually weaned from the Slot Chart (Unit II) to this third Unit. This structured approach helps the child to build confidence through consistency. After the child has developed the necessary confidence, the teacher will begin to help him reposition specific sections of the chart to generate sentence transforms. This is a "flexibility" factor important for the development of natural written language, presented within a structured approach necessary for the child to gain self confidence.

6th Phase

Eventually the child begins to learn about the grammar (rules of the game) concerning the language he has acquired.

The wall chart and supportive materials are also designed to help the child develop self-monitoring skills. A child who has not or cannot depend on sound symbols for self-monitoring (preventive, correcting, alerting) purposes, must be given other cues that will help him acquire those necessary skills. It is ego deflating to constantly have to ask if something he has written is correct or incorrect.

Since the child has completed Unit I and Unit II and is already writing most of his functional vocabulary from memory at approximately age 6, it is not necessary to formally teach the alphabet or writing skills when he enters the first grade (age 6). The process becomes one of increasing his written vocabulary, sentence length, and his ability to generate more sentence transforms.

SUMMARY

At the very beginning of Unit I and following into Units II and III, the student will have his written language charted in a notebook to show rate of progress. The notebook is entitled the Student's Patterned Language Progress Notebook. The Progress Notebook will then be passed from teacher to teacher from year to year showing the exact phases of development that has been completed by the child and the exit level skills that the child has demonstrated to the teacher. This, of course, is dove-tailed exactly with the terminal objectives that are outlined in the school's written language Curriculum Guide. This will provide the necessary consistency throughout the school as previously mentioned as being one of the basic criteria. Also, since the program can be introduced to a child as young as 18 months of age and can be utilized throughout high school on a remedial basis if necessary, this provides the comprehensiveness that is mentioned as a basic criterion for good written language program.

Anyone who desires to know more about any one or all of the 3 units of the Patterned Language program of materials can write to Bill Peck at the Oregon School for the Deaf, 999 Locust Street, N.E., Salem, Oregon 97310. Also, workshop time can be arranged for groups having such an interest.

MEETING THE NEEDS OF THE DEAF CHILD WITH CEREBRAL PALSY

Linda Searle Theil, Instructor, Deaf Education Program,
Southern Connecticut State College, New Haven, Conn.

Scope of the problem

Deaf children with cerebral palsy constitute a multiply handicapped group that is just beginning to be defined not only in numbers but by educational need. Incidence figures for single handicaps vary widely according to the nature and size of the samples and identification criteria. Estimates of the incidence of cerebral palsy range from 1.7 to 6 cases in every thousand live births. (Chance and McDonald, 1964; Dunn, 1973). The incidence of hearing loss may be as high as 67 per thousand population (Schein and Delk, 1974). However, only 5.8 per thousand school age children are believed to have losses that are educationally handicapping (Dunn, 1973). The report of the

Annual Survey of Hearing Impaired Children and Youth (1968–1969) established the incidence of cerebral palsy to be 2.7 percent of its hearing impaired population. Prevalence rates of hearing loss among the cerebral palsied range from ten to thirty percent (McDonald and Chance, 1964).

These figures suggest that hearing loss is frequently associated with cerebral palsy. They also indicate that there are probably a great number of multiply handicapped hearing impired children who are not in schools or classes for the deaf included in the surveys.

Children who have two or more severe handicaps are difficult to place in programs still geared toward single handicaps. When mobility and self-care are major problems in addition to communication, the former are usually given priority when placement is determined. Many cerebral palsy children with hearing losses are found in programs for the physically handicapped, where they receive treatment for motor problems, but where the communication and language problems arising from hearing impairment may be inadequately dealt with. After identification and location of these multiply handicapped deaf children, provision of proper education and adjunct services for the child and his family must be developed.

Nature of the problem

The deaf child with cerebral palsy has special needs that require an individualized curriculum to be carried out by a team of specialists. The combination of deafness and cerebral palsy produce barriers to growth and learning that do not exist with either of the separate handicaps.

Cerebral palsy is a multiple handicap. It refers to any paralysis, weakness, incoordination or functional aberration of the motor system resulting from brain pathology (Perlstein, 1950). This can result in problems of mobility, speech, respiration and other bodily functions. Beacuse the brain is involved, associated handicaps including mental retardation, perceptual problems, emotional disturbance, aphasia, visual problems and orthopedic problems as well as hearing loss frequently occur with it.

The deaf child with cerebral palsy often lacks the mobility to explore his environment and develop the wealth of life experiences upon which language must be built. The deaf child's early non-language experiences are much like those of the hearing child, in that he is able to move about his world, crawling under tables and over chairs, jumping, running, and exploring with his hands and eyes. Severely involved cerebral palsy children are able to learn much through their eyes and ears. They can acquire receptive language through listening (Irwin, 1966) and learn vicariously about many things they cannot do themselves. The deaf child's strengths lie in his mobility, dexterity, and visual capacities. The cerebral palsy child relies on his vision and hearing.

The deaf cerebral palsy child is handicapped by having two impaired major avenues of early learning—he is restricted in his own physical explorations and he is deprived of the usual means of learning the language that will enable him to interpret that world as well as communicate with others who share it. These children must rely heavily on visual interaction and must depend on other people to help them interpret their visual impressions. The child's ability to learn and to function as independently as possible are maximized by implementation of the team approach to his education.

Team approach to education

The team approach is a response to the recognition that multiple handicaps affect the child at all stages and in all phases of his adjustment to life. The parents, physicians, the teacher of the deaf, speech, physical and occupational therapists, the audiologist, the social worker, the psychologist and dormitory parents should be included in the team. The child himself should be considered an active, not a passive participant in the process.

All members of the team work together gathering information, exploring techniques and materials, and coordinating efforts to provide a total integrated program for the child. The team approach cannot be haphazard. Regular planning and consulting time is needed. Records must be kept. The effort must be one of coordination and mutual respect if the child is to benefit socially, emotionally, physically and intellectually. Each specialty works with the others in an effort to maximize the child's functioning.

Educational programming

Communication, self-care and mobility are major considerations in programming for the deaf child with cerebral palsy. These are closely related functions in the cerebral palsy child with severe involvement. Motor involvement of the mouth and breathing organs make speech difficult. Likewise, deafness makes it difficult for a child to develop natural language as well as monitor his own articulation. The combination of poor motor control and impaired auditory self-monitoring may make oral communication an unrealistic goal for the severely multiply handicapped child.

In such cases, alternate forms of communication are needed. Sign language, picture boards and communication boards are viable options. Conventional signs may be adapted for the cerebral palsy deaf child in a number of ways. Difficult hand positions may be simplified to accommodate the child with poor fine motor coordination. The Development Team of the Connecticut Office of Mental Retardation has developed a system of adapted signs based on the American Sign Language. Originally designed to be used by nonverbal profoundly retarded individuals, these signs are also applicable to the deaf child with cerebral palsy.

The adapted signs that the child uses should be taught to houseparents and therapists to ensure transfer and reinforcement of communication efforts beyond the classroom. It is helpful to include the children in sign language classes for staff members and parents. In this way, the adults are able to see exactly how each child makes particular signs. The children not only enjoy taking an active part in the instruction, but become aware of the other people with whom they can communicate.

Even children with severe hand involvement can learn some functional fingerspelling over time. Young children's names are an important and highly motivating place to start. Cerebral palsied fingers are positioned by the teacher in order to establish a kinesthetic representation of his name for the child. The physical therapist can instruct the teacher in positioning and exercises that will enable the child to make better use of his hands. Later, the child may be able to use one of his own hands to position the other. Still later, the child may gain enough control to fingerspell his name intelligibly without assistance. The success of the process depends on the degree of physical involvement, the letters that must be fingerspelled and the child's internalized motivation. Lipreading, print and auditory input are used simultaneously to strengthen the association.

Direct experiences with learning materials and situations are essential to a curriculum for multiply handicapped deaf children. Inner language is acquired through manipulation, experimentation and active observation. This inner language is the basis of overt receptive and expressive language skills.

A deaf child with severe motor dysfunction of the mouth and hands may be extremely limited in his ability to express himself fully using only speech, signs and gestures. Communication boards using pictures, words, letters or a combination of these can be devised to fit the needs and abilities of individual children.

The receptive vocabulary of the cerebral palsy child often far exceeds his expressive vocabulary, for reasons discussed above. The creativity and insightfulness of the team members must be drawn on to enable these children to use the abilities they have to express themselves as fully as possible. It may be necessary to devise special equipment in order to achieve this goal.

Schultz and McDonald (1971) have outlined a procedure for the evaluation and construction of communication boards developed at the Home of the Merciful Savior for Crippled Children in Philadelphia. The process of development is stressed, for the boards should expand and change as the child's ability to communicate grows. Function is also stressed; the board should be based on the child's interests and needs.

Communication board assessment begins with a language evaluation by the teacher and speech therapist, including all modes of expressive and receptive language. A child whose receptive skills are far in advance of his expressive skills is a good candidate for a communication board. An important aspect of the evaluation procedure is careful observation of and interaction with the child. An aphonic child may be able to respond with little more than a sparkle in his eye or generalized activity when he understands or reacts to something. Parents, teacher and therapists must be alert to these signs. But only when a child has a specific, reliable means of communication can his comprehension be measured objectively.

Following the language assessment, the question of the child's physical capabilities and modes of response are explored by the physical and occupational therapists. Can the child point using his finger or a grasped instrument? Can he use a helmet equipped with a pointer if he cannot use his hands? What areas of the board can the child point to accurately? What is his range of controlled motion?

After these questions have been answered, information from all the team members is shared and discussed and an initial board can be constructed. A beginning board for a young child may consist solely of pictures. The vocabulary or language should be functional for the child. That is, the concepts included on the board are ones the child needs and is motivated to use. The ability to communicate "I'm thirsty" has more meaning for an aphonic child than "The house is red." Parents and dormitory staff can suggest appropriate words and concepts to be included. Pictures of family members, pets, the child's home and friends can be obtained from the parents. Pictures of a toilet, bed, a glass of milk and favorite toys are good functional choices that may be included. The number of items chosen should not be overwhelming. Physical separation of pictures to aid accurate pointing and visual discrimination of words and pictures should be checked before placing them on the board.

As the child's language and communication ability grow, the number of items on his board can grow and change in form. Pictures may be used at first, then pictures with printed labels, and finally the words alone. The child who develops reading or word recognition skills can grow into a very complex board. Language boards using only words are usually arranged in columns according to the Fitzgerald Key with headings for nouns, verbs, where phrases, etc. This helps to organize the child's vocabulary and sentence structure. Boards could also be arranged using the patterning approach developed at St. Joseph's School for the Deaf in St. Louis. Parents, peers and staff who work with the child should be instructed on how to use the board effectively with the child.

As the child increases his motor control through physical therapy, he may graduate from a wheelchair to crutches. The child who once had his communication board fixed in front of him on his wheelchair, now needs something he can carry with him, leaving his hands free to use his crutches or canes. This situation calls for a light portable board or book. The physical therapist and teacher must work together to solve the logistical problem of getting a child on his feet without having to leave behind his means of communication.

Family needs

The handicapped child cannot be considered in isolation. He is a member of a family upon which he exerts a considerable influence. The parents of the deaf child with cerebral palsy have special needs. Cerebral palsy is a very visible handicap; deafness is not. Cerebral palsy may be diagnosed at birth; deafness may not be identified until the child is several years old. The parents may have to deal with the grief of discovering they have a handicapped child not once, but twice. The guilt and rejection often experienced by parents of handicapped children hits with double force. The therapists and teachers who work with the child can do much to help the parents recognize their child's strengths and accept him with his limitations.

When a group of parents of deaf cerebral palsied children were asked to brainstorm descriptors of their children, the majority made reference to their children's physical disabilities, while very few phrases were contributed that related to their children's hearing losses and communication problems. The more visible handicap of cerebral palsy dominates the parents' perception of their child. They are initially more concerned that he walk and toilet train himself than communicate. This imbalance is natural.

By working closely with the parents and by listening to their concerns, the professional staff can gain a deeper understanding of the parents' feelings. The parents' own needs must be listened to if they are to be part of the team effort. In this way, they can be led to an awareness of all their child's needs. This is necessary before they can be taught to work with their child and the team to promote his physical, social, and intellectual growth.

Once parents are trained to use the communication and therapy techniques with their children, they begin to discover how all areas are related. They find it is easier to help the child in complex motor activities if it is possible to tell him as well as show him what to do. Parents who begin to communicate with their children are able to establish a closeness with their child that they never experienced before.

The goal of an education and therapy program for deaf children with cerebral palsy is the greatest degree of independent functional possible. This is closely tied to the quality of emotional growth the child has experienced. An informed, accepting and supportive family is the most important influence the multiply handicapped child can have in his early years.

REFERENCES

Corliss, Leland. Multiple handicapped children—their placement in the school education program *The Journal of School Health*, March, 1967.

Dunn, Lloyd. ed. *Exceptional Children in the Schools*, New York: Holt, Rinehart, and Winston, 1973.

Goldberth, Herman and Joseph Fenton, eds. *Communication for Those with Cerebral Palsy: A Guide for the Development and Use of a Communication Board*. New York: United Cerebral Palsy of New York State.

Irwin, Orvis. A comparison of the vocabulary of use and of understanding of cerebral palsied children, *The Cerebral Palsy Journal*, May–June, 1966.

Manual Language Dictionary: Functional Vocabulary for the Retarded. Hartford, Connecticut: Connecticut Office of Mental Retardation.

McDonald, Eugene and Burton Chance. *Cerebral Palsy*. Englewood Cliffs, New Jersey: Prentice Hall, 1964.

Mecham, M. J. and D. Jones. A nucleus vocabulary for use in building language skills of the cerebral palsied child, *Journal of Exceptional Children*, Vol. 22, 1956.

Perlstein, M. A. Medical aspects of cerebral palsy: Incidence, etiology, pathogenesis, *American Journal of Occupational Therapy*, Vol. 4, 1950.

Schein, Jerome and Marcus Delk. *The Deaf Population of the United States*, Silver Spring, Md.: National Association of the Deaf, 1974.

Schultz, Adeline and Eugene McDonald. Communication Boards With Aphonic Cerebral Palsied Children. A paper presented at the 1971 National Convention of the American Speech and Hearing Association in Chicago, Ill.

Shere, Marie. The Cerebral Palsied Child with a Hearing Loss, Reprint No. 750, Washington, D.C.: Volta Bureau, 1960.

ALTERNATIVE APPROACHES TO SERVING CHILDREN WITH LEARNING PROBLEMS IN A RESIDENTIAL SCHOOL FOR THE DEAF

Virgil Flathouse, Ph. D., Superintendent, Texas School for the Deaf, Austin, Tex.

The purpose of this presentation is threefold: (1) to review some characteristics of deaf children with learning disabilities; (2) to identify possible effects of a residential setting on these children; and (3) to provide some alternative approaches to more adequately serve these children using resources that are, for the most part, currently available at most residential schools for the deaf. The presentation is in response to the critical need now being felt in many residential schools to provide services to deaf children with more than one learning problem, i.e., multi-handicapped deaf children. This need is often exacerbated by a lack of appropriate facilities, personnel, supplies and equipment in the residential setting to adequately service this particular population. Compounding the problem, these schools at the same time are expected to maintain the high quality of services they now provide to their population of "normal" deaf children.

It has been noted that a large number of multi-handicapped deaf children may currently reside in residential schools (Schein, 1975), and that this number may increase in the future (Lennan, 1974). It has also been noted that many of these multi-handicapped deaf children manifest learning problems commonly referred to as learning disabilities. In a teacher survey done at the Texas School for the Deaf in 1973, 14% of the students were identified as having learning disabilities, and a total of 33% were identified as having more than one learning problem. It is suspected that this number may be higher now, as indicated by no less than 14 out of 23 classes (approximately 115 children) in the primary school will require special support services next year because the children's achievement levels are so far below average. Although the 1975 "Directory of Programs and Services" in its report entitled "Deaf Students with Other Disabilities" (Schein, 1975) does not contain a special category for learning disabilities, one might guess that learning disabled children are placed under categories of "brain damage", "visual disorders", "perceptual motor disorder" and/or "emotional or behavioral problems". The incidence figures for these separate categories alone range from approximately 8 to 18 percent. Prevalence figures for learning disabilities alone in the general population range from 0–20% generally, with some estimates as high as 40%. When the etiology of deafness is considered, 28% of the cases of deafness have causes which could also be a factor in the presence of a learning disability (Hagger, 1972; Vernon, 1969).

One reason for such variation in prevalence figures can be found in the nature of the field of learning disabilities. It remains a relatively new field, still retaining some of the "mystique" it enjoyed in its beginning. Part of that mystique evolved from the confusing variety of definitions, causes, labels and remedial techniques commonly associated with the field at one time or another. This variety contributed in no small part to the development of some rather sophisticated, esoteric (and often conflicting), research and methodologies in the field which in turn have been presented in various ways and forms to professional personnel. The lack of consistency in definitions alone could result in questionable prevalence figures, and with other complicating variables involved such as causes and labels, it is almost certain that those figures are suspect. It is also interesting to note that the term "learning disabilities" appears to not yet have the stigma associated with it that burdens some other special education terms (e.g., mental retardation, emotional disturbance), yet the term "learning problems" is already emerging as an acceptable substitute.

In general, the field of learning disabilities is concerned with how information is processed by the individual. This processing entails receiving information, integrating this information with previously received information, and expressing information. Problems can occur in any one of these three areas, or in any combination of the three. These problems are generally evidenced in education through two significant behaviors, academic failure and a discrepancy between potential and achievement. The study of these behaviors in learning disabilities typically has been limited to the classroom, in the academic areas. However, it should be recognized that the processing of information is dependent upon a large number of factors, not the least of which is the affective domain, and that information is commonly processed outside the classroom as well. This calls attention to the residential setting, and its possible adverse effect on deaf children with learning problems.

A basic characteristic of the residential setting is that it is an almost ideal environment for the self-fulfilling prophecy, or the labeling process, ("I am what I think you think I am") to operate at maximum effectiveness. This is due in large part to the students' relative lack of day to day privacy, to the twenty-four hours a day that they are on campus, and to the fact that practically everybody knows everybody else. In general, the smaller the school, the more deleterious the labeling process can be. However, the larger the school, the less likely are those students to be labeled who may need the visibility in order to receive appropriate supportive services. An example of this would be the withdrawn child who causes no problems, thus is seldom labeled, yet who perhaps needs special attention much more than the overtly aggressive child who openly seeks it.

A student with a learning problem often finds himself or herself in the unfortunate position of being labeled (e.g., dumb, uncooperative, immature, slow, etc.) by teachers, peers, houseparents or others. This commonly results in a continuing series of failures which grow more severe as time passes unless some type of intervention occurs. Typically this intervention is initiated by a specialist who recognizes the problem and plans a remedial strategy to overcome it. These strategies may range from simple "time-outs" from emotionally stressful activities to long-range intensive tutoring plans. However, the availability of such specialists (e.g., educational diagnosticians, diagnostic teachers, counselors, etc.) who could plan and implement effective integration techniques for deaf children with learning problems on the campuses of residential schools is rather limited. In view of this, and in view of (a) the increasing number of multi-handicapped deaf children; (b) the prevalent lack of appropriate facilities, supplies and equipment available to adequately serve these children; and (c) the often limited funds available to work with in providing services to them, it is clear that some alternative approaches for delivering appropriate educational services to deaf children with learning problems in residential programs are warranted. The following few suggestions for program modifications requiring minimal cost reflect the above concerns.

1. *Resource room.*—A room can be set up where students can come in for individual help or for small group work. This room could also be used as a place for students to "escape" some of the pressure situa-

tions with which they may find difficulty in coping. The teacher in this room should have some training and experience in learning disabilities and/or emotional disturbance. The teacher should also have skills in working with other teachers on a consultant basis, helping the teachers improve their abilities to deal with students with learning problems. Thus the resource room is not only a "resource" to students, but to teachers as well.

2. *Rearrange class schedules.*—Larger classes can be set up for the presentation of certain concepts, thus freeing certain teachers for resource work with the students. The public schools have been doing this for some time, and although there are recommended teacher-pupil ratios in the area of the deaf, these ratios should not be considered sacred for all concept presentations. A high school science program may arrange for forty students to view an hour's presentation involving one teacher. This would free perhaps three other teachers for that hour.

3. *Rearrange lunch schedules.*—Staggered lunch schedules are suggested for the larger schools, which could allow for more time for teachers and houseparents to interact in resolving students' problems. It could also allow for more homeroom time, which has advisory aspects.

4. *Alter beginning and ending times of the school day.*—Granted that some states no doubt have certain rules and regulations pertaining to the school day, there is often a great deal of flexibility in setting the hours of the actual school day. In combination with staggered lunch schedules, it is possible to have more time to advise the students, yet have a shorter working day. This would include, for example, reducing the lunch period from an hour to thirty-five minutes.

5. *Extracurricular activities by teachers.*—When compared to the public schools, many residential schools have fewer extra duties for their teachers. One suggestion is to assign at least one extra-curricular activity to every teacher. This duty could involve a number of activities, such as setting up magic circles, extra tutoring, cottage/dorm visitations, etc. These activities often have the extra advantage of taking the teacher out of a stereotyped role, e.g., the teacher who goes on a weekend campout with students is viewed quite differently by them, and vice versa!

6. *Volunteers.*—An active volunteer program can be set up. Select a coordinator, and organize it replete with name tags, procedural manuals, interview process, etc. This is an extremely viable resource for providing additional help to students with learning problems.

7. *Secret pal system.*—This usually works quite well with the younger students, and it gets the older students involved as well. A system can be set up whereby a youngster's "secret pal" communicates with him/her through third party messages, notes, and letters at appropriate times (usually when the youngster is in need of a friend, i.e., for someone to show they care for him). A date is set when the youngster will meet their "secret pals", preferably involving a party atmosphere. Volunteers from outside the school can also work into such a system quite well.

8. *Informal inservice training.*—Set up sack lunch seminars with the teachers, principal, and superintendent to discuss concerns in an

informal manner. The placing of appropriate signs (e.g., "Teacher, what did you learn today?" or "Did you just label?") in teacher lounges are often effective in sensitizing individuals to the negative aspects of labeling.

9. *Revise counselor schedules.*—For those schools fortunate enough to have professional counselors, it is suggested that their schedules be altered so that they would be available during selected evenings for student conferences. This is often a more opportune time for students, and there is much less visibility associated at that time with their visits to the counselor.

10. *Remedial materials in cottages/dormitories.*—Arrangements can be made with the library or media department to supply certain remedial materials to the cottages/dormitories for use by certain students. This involves a certain amount of cooperation between the instructional area and the student life area, but the dividends are worth the efforts in terms of student achievement and self-concept gains.

11. *Professional library.*—A professional library can be set up for use not only by teachers, but by houseparents, parents, and other school staff as well. In connection with this, certain times can be set up when informal seminars could be held to discuss certain topics appearing in the literature.

12. *Resource houseparent.*—Arrangements can be made to have a "floating" houseparent, one who is skilled in staff development and crisis intervention techniques. His/her job would entail visiting in the cottages/dormitories in the evenings, providing guidance and support to the houseparents as they work with their children. A competent person in such a position usually eliminates about 75% of potential behavioral problems in the student life area before they actually become problems.

13. *Infirmary as a resource.*—For after-school hours, a place is often needed where students can go for rest and privacy, especially when they find they cannot cope with the stress of a situation. One of the most viable locations for a quiet place to deal with behavior problems in that area is the infirmary. With little additional training, nurses can provide effective support services to students who are in emotional crises, and the infirmary offers a welcome respite from the rigors of constantly competing with peers and dealing with authority figures. Plus, it is usually open twenty-four hours a day.

The above suggested alternative approaches may be appropriate for some facilities, and inappropriate for others. They are offered in the spirit of promoting more adequate services to our multi-handicapped deaf student population, and although brief in description, it is hoped that some may be found useful by residential school personnel.

REFERENCES

Schein, Jerome D. Deaf students with other disabilities, *American Annals of the Deaf*, Vol. 120, No. 2, April, 1975, pp. 92–99.

Lennan, Robert K. Administrative considerations in educational programming for multi-handicapped deaf children. *Proceedings of the Forty-Sixth Meeting of the Conference of Executives of American Schools for the Deaf*, Tucson, Arizona, 1974, pp. 20–49.

Hagger, D. Specific learning difficulties and deaf children, *Australian Teacher of the Deaf*, April, 1972, Vol. 13, No. 1, pp. 13–19.

Vernon, McCay. *Multiply Handicapped Deaf Children: Medical, Educational, and Psychological Considerations*, Research Monograph, Council for Exceptional Children, Washington, D.C., 1969.

CAREER EDUCATION: AN OVERVIEW AND ITS PRESENT STATE OF ART

Victor Galloway, Ed.D., Chairperson, Director, Developmental Education, Model Secondary School for the Deaf, Washington, D.C.

Today we will attempt in one hour and thirty minutes to cover materials that have excited the minds of many persons and that have filled volumes of literature. With us we have four individuals who have been deeply involved in the various aspects of career education and who will share with us their experiences and perspectives on the subject. I shall introduce each participant prior to his or her presentation. I am Victor H. Galloway, Director of Developmental Education at the Model Secondary School for the Deaf in Washington, D.C.

Definitions

It is necessary, I believe, that we all come to some mutual understanding of some of the commonly used terms. As is true in many professional fields, there is the problem of semantics in the educational circles. The terms *vocational education*, *career education*, *career development*, *industrial arts*, *prevocational education* and other similar terms have, unfortunately, been used interchangeably.

Many individuals will have their own definitions of the common terms and therefore may have some difficulties with the definitions that I have gathered from several sources developed by leading authorities in the field of career education including Dr. Kenneth Hoyt, Director, Office of Career Education in the U.S. Office of Education; Dr. Sidney Marland, President of the College Entrance Examinations Board and former U. S. Commissioner of Education; and Dr. Grant Venn, former Associate Commissioner for Adult, Vocational, and Library Programs in the U.S. Office of Education, among others. It is important, however, that we consider such definitions as offered by those individuals who have had and will continue to have direct impact on the policies on career education and interpretation of them.

It has been my experience that the educators of deaf persons commonly equate career education with vocational education. Dr. Hoyt has defined career education as the totality of experiences through which one learns about and prepares to engage in work as a part of his or her way of living. The total efforts of education are combined with those of the community to help all individuals to become familiar with the values of a work-oriented society. Hopefully, these individuals would integrate these values into their personal value systems and thus implement them into their lives so that work becomes a satisfying life experience.

Vocational education is more appropriately defined as all of those aspects of educational experience which help a person discover his or her talents, to relate them to the world of work, to choose an occupation, and to refine his or her talents and use them successfully in employment. A term that has very frequently been confused with vocational education is *industrial arts education*. It is a combination of educational activities, usually at the secondary level, concerned with industry and crafts, their raw materials, products, machines, personnel and problems.

Career development refers to the total constellation of events, circumstances, and experiences of the individual as he or she makes decisions about himself or herself as a prospective participant in the labor market. Prevocational education is used to describe programs designed to expose students to a variety of career options through activities such as work sampling and hands-on type of training so that they may begin the developmental task of formulating life goals.

It is not my intention to go into these various educational strategies in detail since the other speakers will cover them adequately. Rather, I would like to discuss some of the reasons why career education has suddenly become a household word, some of the rationale, and some of the approaches being adopted in many parts of the nation.

Rationale

Not long ago Hoyt (1974) labeled as indefensible the idea that every high school student be in possession of a marketable skill. "To do so would require mass enrollment in vocational education . . . and there is no more reason to require that every student be enrolled in vocational education than there is to require enrollment in any other program." (Hoyt, 1974) Notwithstanding, one of the goals of general education is preparation for the world of work, a preparation bespeaking competencies, adaptability and know-how. Work then becomes an outcome of education, a learned form of social behavior. The development of acceptable work personality is perceived as essential.

In a document which I prepared to describe the strategies for implementation of a career education program at MSSD I made the following statement:

> Since adulthood does not, in and of itself, confer the trait of employability, it must ergo be nurtured and brought to fruition in the child's formative years. Employability is thus a constellation of learned behavior patterns embodying such factors as appearances, dress, speech, attitudes and values * * * a constellation that comes quite appropriately within the compass of the educational system.

The U.S. Office of Education has released a policy paper on career education (DHEW, 1975) which enumerates conditions calling for educational reform. Because a variety of sources has voiced dissatisfaction with American education as it currently exists, a call was issued for educational reform. Career education represents a response to this call. The critics of American education decried the large numbers of persons leaving the educational system who lacked the basic academic skills required for adaptability in today's society. Students are unable to see any great degree of relevance of what they learn in school to their future plans, if such plans do, indeed, exist. There is a great deal of concern that schools are geared primarily to meet the needs of college bound students and that there is a tendency to treat those students who will never be college graduates as "not quite having made it." Such students lack the self-understanding and decisionmaking skills that are so essential if they are to successfully adapt to a rapidly changing society.

Historically, vocational educators have stated that the objective of vocational education is to develop programs that meet the needs of he labor market. The concept of career education is rooted in a basic shift in philosophy which places top priority on the career development of the individual rather than on the needs of the labor market, thus the focus on an aggregation of ideas, hopes, desires for a highly relevant educational system for each individual person. As the next speaker will, I am sure, indicate to you, career education is a concept that should permeate throughout the school curriculum from kindergarten through postsecondary educational levels. It meets the needs not only of the college bound students but also of those individuals who have interests other than those that require further nurturing and cultivating in a college or university. It is equally concerned with the needs of female students as with the male.

Other concerns that have led to efforts for remediation include the criticisms that American education has not taken steps to keep abreast of the developments in the total occupational society with the resultant large numbers of overeducated and undereducated workers. It has been far too slow in mounting required programs to meet the needs for continuing and recurrent education of adults. These criticisms invariably point out the relationships between education and lifestyles of individuals. Career education was thus perceived as a common element that could relate to the needs of all persons involved in any educational pursuit. By relating to such individual personal growth goals, the societal goals for education would also be achieved.

It is important at this point that the concept of work be clarified so that the rationale offered earlier becomes plausible. Hoyt has suggested that "work" is conscious effort, other than that involved in activities whose primary purpose is either coping or relaxation, aimed at producing benefits for oneself and/or for oneself and others." This, then, means that both paid and unpaid work are included as is leisure time. Career education then becomes a feasible vehicle for humanizing the goals of American education.

Approaches

In developing the comprehensive conceptual statement on career education the U.S. Office of Education emphasized the importance of the independent roles of the State education agencies and local school systems in developing and expanding their own concepts of career education. As might be expected, different agencies and schools will develop different career education models and adopt different strategies within a single model. When the then Commissioner Marland, considered by many the father of the career education movement, launched his personal campaign to bring career education into schools, he initiated the Comprehensive Career Education Model which included four major components. The following description of the four approaches comes from the document prepared by Dr. Brian Fitch for the Model Secondary School for the Deaf, *Orientation to Career Education.*

The four approaches are: (1) the school-based model; (2) the employer-based model; (3) the home/community-based model; and (4) the residential-based model.

The school based model is a system that operates in an educational system from kindergarten through twelfth grade. The model operates through infusion of concepts into the existing curriculum rather than displacing them. Career education goals and content become parts of the curriculum and school environment rather than constitute a separate learning sequence or structure. The objectives of this model are to help each student develop: (1) A comprehensive awareness of career options; (2) a concept of self that is compatible with our work-oriented society, including positive attitudes about work, school, and society; (3) personal characteristics as self respect, initiative, and resourcefulness; (4) a realistic understanding of those relationships between the world of work and education that assist individuals in becoming contributing members of society; and (5) the ability to enter employment in a selected occupational area and/or to go on for further education.

The employer based model uses the community as a classroom on a twelve month basis and is supported by business in conjunction with the schools. The principal participants in the model other than the students include labor unions, chambers of commerce and trade advisory councils. The goals are to: (1) Provide an alternative educational program in a work setting for students of secondary school age; (2) unify the positive elements of academic, general, and vocational curricula into a comprehensive career education program; (3) increase the relevance of education to the world of work; and (4) broaden the base of community participation.

This model is probably better known as the Experience-Based Model. Dr. Keith Goldhammer, Dean of College of Education at Michigan State University, recognized that "employment sites did not have personnel to provide, and employers didn't want to adapt to, all of the educational needs of youth." He became involved in the development of the EBCE model which was located external to both schools and employers. Since this approach was specially funded by the National Institute of Education and the experiment is still underway, I will not discuss the Experience Based Model any further.

The home/community based model was established with the following purposes: (1) To develop systems for getting education into the home and the community; (2) to provide new career education programs for adults; (3) to establish a guidance and career placement system to assist individuals in occupational and related roles; (4) to develop more competent workers; and (5) to enhance the quality of the home as a learning center.

The model has for its target population the adults who had little formal schooling and inadequate career guidance and utilizes home and community institutions as career education centers.

The residential based model provides a program for disadvantaged individuals and families in rural areas. The program components include education, family life and community services, health services, and economic development services. Training sites are available for family units and individuals for the purpose of developing an appropriate career through employment, study, home management, or a combination of these.

A publication, "The State of the Scene," prepared by the Office of Career Education, U.S.O.E., provides a resource guide, albeit a limited one, covers a good bit of activities, materials, and people involved in career education. Variations of the four models are included in the guide. Individuals or organizations seeking ideas for their own programs will find the guide very helpful.

Career Education for the Deaf

Hoyt was deeply concerned that career education be available to all persons of all ages in all kinds of educational settings and he singled out handicapped persons as a group that could benefit greatly from this type of programming. We all have read summaries of research studies that have raised concerns about the underemployment of deaf individuals. We are all too aware of the fact that after twelve years of schooling the deaf graduates must still resort to the "trial and error" approach in finding a place under the sun. That so many deaf individuals do find their places under the sun is a tribute to their ingenuity and to the perseverance of the human spirit. There are, however, countless deaf individuals who undergo needless suffering because of deficiencies in their previous training. The philosophy of career education is that individuals can be trained to control their own destinies and deaf individuals, including the so called low verbal deaf, have a right to obtain this type of education.

Career education need not be expensive. Elaborate vocational education shops do not necessarily constitute exemplary career education. What is needed is a full partnership between the school administrator, the teacher, the guidance counselor, the vocational teacher and the student. The deaf individual could ask for no less!

The other speakers will discuss career education in greater detail so let us begin with the topic "What is Career Education"?

WHAT IS CAREER EDUCATION?

Brian Fitch, Ph. D., Program Director, Career Education Center for Technical Vocational Education, Ohio State University, Columbus, Ohio

Introduction

What is career education? I cannot answer that question; therefore, in the best pedagogical fashion, I will avoid the question by talking around it and by asking you the question at the end of my presentation!

If I were to give you a pat answer to the question, "What is career education?" I would be misleading you. There is no single definition that covers all the implications of the term. Its meaning is situational; that is, career education is defined by those who implement it in a manner best suited to the needs of the users.

While I cannot define career education for you, I do intend to talk to you about the background of career education and about its substantial theoretical basis. I would also like to attempt briefly to translate theory into practice by identifying several career education goals that can be part of any school's curriculum. I hope that this discussion will help you to define career education in your own situations.

Background

Most proponents of career education agree that it represents a systematic effort to enable students (1) to make informed decisions about their life's work and (2) to acquire skill in the performance of career roles. As such, career education is a comprehensive concept. It includes both academic and vocational education, as traditionally defined, as well as a variety of other educational alternatives.

While the form of career education differs from school to school, there are several features that should be reflected in any context:

Career education represents a personal development process that begins early in life and extends into adulthood.

Career education can supplement, rather than displace, existing educational programs by underscoring their relevance.

Career education emphasizes the relationship between school and work by demonstrating how workers use knowledge, skills, and personal attributes that can be developed in school.

Career education goals can be achieved in a variety of ways, including community based experiences and the infusion of career education concepts and activities into existing curricula.

Career education involves making informed decisions about educational programs and occupational entry.

Each of these points is important and deserves more emphasis than time today will allow. But the first point, that career education represents a personal development process, merits special attention.

Historically, vocational guidance has been concerned with matching people and jobs. (*1*) However, research during the last twenty-five years has emphasized the development of the individual's ability to make career choices rather than those choices themselves. Thus, career development has become the crux of career education, which now emphasizes the gradual, developmental nature of the personal choice and adjustment process. Career development begins early in a child's life and is accomplished through growth and learning that are marked by a number of stages of increasing competence. (*2*)

Career development theory

Let us examine briefly some of the major points that underscore the importance of career development as the core of career education.

An individual progresses through many career development stages before he is ready to make a career choice.

Cultural stratum and socioeconomic class have a large bearing on career choice.

People should be provided with experiences that allow them to discover and try suitable work roles.

Decision making involves action: people must be given ever-increasing responsibility for their own learning and direction.

Interventions in career development must take place early in an individual's life. Attitudes formed during this period eventually appear in an individual's vocational commitment or rejection.

The career information provided individuals must be comprehensive and realistic. Individuals should receive not only such information as potential earnings, education and training requirements, and potential positions available; they must also learn about the psychological and social conditions in which work is performed.

These points have been compiled from the writings of a number of career education theorists. Among these, Ginzberg and his associates deserve particular attention. Ginzberg found that occupational choice is a developmental process. That is, it is not a single decision but a series of decisions made over a period of years. Each step in the process has a meaningful relation to those that precede and follow it. (*3*)

Donald Super's work has also contributed substantially to career development theory. Super and his colleagues have found that there is an essential interdependence of personality and vocational development. Therefore, the primary construct in career development is the development and implementation of the self-concept. The individual chooses occupational or educational alternatives that will allow him to function in a role consistent with his self-concept. (*4*)

Holland also has emphasized the importance of self-knowledge to the individual as he moves through educational decisions to occupational environments. Individual behavior is a result of the interaction between one's personality and environment; thus, choice is an expression of personality. (*5*)

From theory to practice

Let us move now from theory to practice. As you consider the following goals, ask yourselves if they do not apply to each area of your school's curriculum.

These major goals are:

To realize that growth in reading and communication skills contributes to self-development;

To develop and use inquiry and problem-solving skills in making career decisions;

To develop and apply techniques for exploring occupations that may be personally relevant;

To acquire information about the environment, people, and values associated with the world of work;

To develop an appreciation for the personal fulfillment associated with different occupational opportunities; and

To determine the relationship between occupational entry requirements and skills acquired in school courses.

I submit to you that these goals and others like them should be a part of every school's curriculum. Achievement of these goals would strengthen each student's academic performance by demonstrating the relevance of the curriculum to his personal development.

Conclusion

In summary, I would like to emphasize that career choice, entry, and progression clearly are affected by education. Education can provide both the training that will lead to entry and the exploration opportunities that become the basis for career choice and lifelong learning.

I do not think that education and career education are synonymous. Career education concentrates mainly on career development, while education is more broadly concerned with the development of rational processes, critical thinking, and learning for its own sake. I do feel, however, that career education is a vital part of the broad educational process and that career education goals should be an integral part of every school's curriculum.

I close by asking you, "What is career education?" What form should the career development process take in your school, with your students?

REFERENCES

1. H. J. Bell, *Matching Youth and Jobs* (Washington, D.C.: American Council on Education, 1940).

2. Donald E. Super, *The Psychology of Careers* (New York: Harper and Row, 1957).

3. E. Ginzberg, et al., *Occupational Choice: An Approach to a General Theory* (New York: Columbia University Press, 1951).

4. Donald E. Super, et al., *Career Development: Self-Concept Theory* (New York: College Entrance Examination Board, 1963).

5. J. L. Holland, *The Psychology of Vocational Choice* (Waltham, Mass.: Blaisdell, 1966).

PHILOSOPHY OF CAREER EDUCATION: A THEORETICAL PARADIGM FOR A CAREER EDUCATION PROGRAM FOR DEAF LEARNERS

Judy Cobb Egleston, Ph. D., Senior Research Associate, University of Rochester

Introduction

The Public Opinion Quarterly has editorialized with the story of Benjamin Franklin when he was a boy. His father took him on a walk to see various craftsmen at work, in the hope that this survey of occupations would enable him to choose the occupation he would enter. Today children can still see some kinds of workers on the street or in small shops, but they are much more likely to get acquainted with a wide variety of types of work from what they are exposed to on the T.V. screen. DeFleur (1964) has reported that television content portrays occupational roles that can be characterized as selective, unreal, stereotyped and misleading. He also concludes that there is no systematic attempt on the part of the schools to provide corrective learning so that more realistic occupational information can be brought to the attention of children.

This presentation discusses the philosophical rationale for career education via structured exposures in a school program and one theoretical paradigm for a career education program for deaf learners.

Delineating the concept of career education

The theoretical framework which defines what career education is may be viewed as revolving around four positions. On a narrow-to-broad continuum the first concept represents the economic role of career education. Another position widely covered in the professional literature is the specific training required in the preparation for a job or some paid employment. The third conceptualization, which serves as the basis for the paradigm which follows, includes employability and occupational education but is not limited to the economic or work role. This position defines career education as a comprehensive self-development and career decision-making process approach which we may label "career learning-maturation," a term first used by Munson

(1971). This concept, out of necessity, evolves into a lifetime career-development approach since the intent is an eventual provision for a paradigm of total life-span career development (Hansen and Tennyson, 1975).

There are several features of a comprehensive career education program which seem basic for legitimatizing its inclusion in the curriculum. It should build on career development theory and developmental psychology as its rationale and exploit both content and process teaching-learning strategies. The concept of multipotentiality must be assumed. The idea that each person has the potential for success and satisfaction in a number of occupations liberates individuals from the paranoia of making wrong choices, and enhances the variety of their options. Such a program must also assume equality of opportunity for all, and effectively explode the stereotypes which have limited the career development of a major segment of the potential work force such as minorities, women and handicapped workers.

Various challenges to an individual's career development must be reckoned with in the creation of a career education program if students are to overcome the obstacles which prevent the unique expression of their talents. Societal and economic phenomena impact on individual career development in ways that must be anticipated. A few timely considerations might include: the tight labor market; conflict of multiple life roles; mid-career changes; alienation of college-bound and employment-bound youth (or of school and community) as their values increasingly diverge; and by-passed worker populations who have been beyond the opportunity structure and whose participation in the work force is now being widely sought for purely token purposes to fulfill affirmative action and equal employment quotas mandated by new legislation.

Jones, et al, (1972) have described the various components of the concept "career" as including one's occupation, education, personal and social behavior, learning how to learn, social responsibility and leisure-time activities. Dr. Virginia Trotter, assistant secretary for education, defined career education as the totality of experience through which one learns about and prepares to engage in his or her career.

This total life development perspective provides a personal framework for individuals to help them plan and develop life competencies, attitudes, interests and values. The lifelong process of development within the context of work, which may be done as a paid endeaver or as a service to school, community or family, through childhood and retirement, represents the phenomena of career-learning maturation.

The theoretical paradigm

As we become able to view career development in its broader, more encompassing dimensions, we are able to accept it as a vital aspect of human maturation and intellectual development. Recent research on self esteem and self concept has suggested that children who have a positive self concept tend to achieve more. In the education of deaf learners we should be able to keep in perspective the deprivation caused by the hearing handicap and stress the identification and development of each student's attributes and skills.

Super (1957) has pointed to the relationship between the self concept and vocational choice referring to vocational choice as "implementation of the self concept." Self concept development and career learning-maturation are simultaneous. Much of the compromising that occurs in the adolescent and young adult years, the years of trial-exploratory work behavior, is associated with the maturation of the "self." Vocational ambitions and goals as well as personal aspirations and motivations are a part of the balance which individuals continually seek for themselves. The very progressive nature of individuals' integration and internalization is represented by the compromises they forge between themselves and their world. Career learning-maturation is, therefore, associated with and, to some extent, dependent on the development of self identity.

Placing an emphasis on self-concept development in school is an important educational responsibility and represents another vital dimension of human development (Munson, 1971). While the school must be concerned with the individual's identification of "self" and his/her feelings, it must be equally responsible for helping individuals to use these insights and understandings in viewing more clearly how they can be expressed in the world of work, or, in the broader sense, achieving various life goals. For example, it is helpful for individuals to think about their own behaviors in many different life situation (e.g., taking risks, adapting to a routine, directing other people, performing under stress or following precise directions). These are not only life situations but in certain jobs they can be work situations. As work situations, they can become a daily ingredient of life. Developmentally, then, it seems necessary to help individuals become more aware of the many life (work) situations they may encounter and to engage them in the process of exploring and assessing their own feelings about and behaviors in activities associated with these situations.

To date much of our self assessment has relied heavily on external measures—mainly in the form of standardized inventories of abilities and interests. We have, in reality, denied several dimensions of the self domain that are just as significant as those areas that can be externally validated. An intensive analysis of life goal possibilities, human needs, personal values, individual behaviors, physical characteristics, and personal temperaments are a few of the broad areas that might easily be incorporated in the regular learning experiences of the deaf learner.

Constructive career maturation hinges, in a large part, on the development of the self. Yet, this self is dependent on a broad range of human experiencing. It assumes that individuals have been exposed to as many experiences as their environment can provide. It is further predicated on the belief that these experiences have been sufficiently intense to cause the individual to become aware of the nature of the stimuli (situation) and sufficiently frequent that the individual has had an opportunity to respond in the situation (accept or reject). In other words, self and career maturation are abetted by the process of internalization (Krathwohl, 1964).

The four channels of career learning-maturation

Munson (1971) identifies and describes four basic channels for providing exposures that will feed the career earning-maturation process: (1) the self, (2) the conceptual, (3) the informational, and (4) the experiential. Briefly, each of these can be differentiated as follows: Self exposures focus on the individual and his/her "being" and deal with the many component concepts of self that comprise the total self concept of the individual. Conceptual exposures contribute to the individual's general understanding of the nature of work, work orientations, and work roles and emphasize the development of attitudes and understandings that permit an individual to think abstractly about the role of work in the lives of individuals. Informational exposures provide for input of a factual nature and deal basically with expanding the individual's knowledge about specific jobs in the world of work. The informational channel must provide the very special information about job duties and work requirements and qualifications so that an individual has the needed knowledge for problem-solving and decision-making activities associated with his/her career development. Experiential exposures permit individuals to test their feelings and behaviors toward work, work roles and work role relationships in real or life-like situations.

These four types of exposures should be a vital component of any program that purports to deal developmentally with career learning-maturation. They have been utilized in a comprehensive career education program model developed and piloted over a three year period from 1971–74. This project, sponsored by twelve schools for the deaf in New York State who combined resources in a Cooperative Research Endeavors in the Education of the Deaf (CREED), was designed to evolve a career education model and materials which could be used specifically with deaf students. In this demonstration project, the potential contribution of each channel to the individual's evolving career insights and self awareness was explored and utilized. In the education of the deaf learner, these exposures can be used as the basis for a completely integrated career development curriculum.

The Self

Exposures in the self channel cause deaf individuals to think specifically about themselves—about their values, needs, attitudes, abilities, aptitudes, interest, aspirations, health, motivations, pressures, physical capacities, behaviors, and personal traits. Activities can also be designed to provide them with opportunities to learn how others view themselves. Awareness of how others view themselves and their world can help an individual in distinguishing his/her own uniqueness and in differentiating his/her "self" from others. Students need an opportunity to explore, to analyze and to assess or appraise a good many facets of their "self" and the self concept of others. Through gaming, role playing, valuing strategies, appraisal devices or simulation, deaf students discover areas of interpersonal relations, human feeling and "being." They discover how different we all are and how widely our own feelings can differ. As they learn more about and assess other styles of being and living, other alternatives are made known to them providing them with more potential choices for their own way of living.

The Conceptual

The conceptual channel is concerned with helping deaf learners to master and manipulate the information available to them. Concepts develop over time and are a function of understanding (comprehension. They emerge as a result of mental manipulations (information processing) in which learners organize and synthesize their information. In doing this, they engage in the cognitive processes of discriminating and generalizing. Learning concepts follows the sequence of identifying, grouping, explaining, defining and generalizing.

Language serves an important function in conceptual learning. In the career learning-maturation process, deaf students need to understand the special vocabulary associated with concepts of work, work roles and work functions. This vocabulary can be infused into content units where the words would be appropriately studied as part of the regular academic subject. Such work functions as negotiating, computing, and analyzing are already very much a part of typical classroom experiences. Conceptualization of the tasks involved in a work situation may occur with repeated exposure and teacher guidance.

The Informational

The introduction of occupational environments and opportunities emphasizing occupational fields and families, levels of worker responsibility, place of employment and related information about work environments are typical areas of information that should be covered. Students cannot be exposed to all the information which they may eventually need. They can learn what kinds of job information they may need. They can learn how to locate information about the general duties of a job, typical work situations, the physical demands and conditions of an occupation, the personal qualifications and preparation requirements.

The informational channel has a much stronger tradition and more numerous techniques are available for its implementation. We need to experiment with more appropriate ways of introducing and utilizing occupational information and for integrating it with experiences in the other channels of career learning-maturation. The informational channel need not and should not be an isolated area on which attention is focused at crisis points only. If young people are going to have experience in processing information and in making choices and decisions, then such information should be developmentally integrated.

For the deaf adolescent and young adult, specific information emphasizing the accommodations which are essential in modifying the work activities for hearing deficiencies are particularly important. Such information is not sufficiently available at present. Deaf learners may have little comprehension (or awareness) of work adaptations and work restrictions and their relation to their own personal strengths or limitations particularly in the area of on-the-job communication.

The Experiential

The experiential channel is commonly untapped in the school program. Yet, it is a most potent one. Without experience, career learning-maturation suffers. Program exposures lose meaning and significance in their remoteness from everyday existence. Educators have viewed the experiential channel in its most obvious terms of providing real on-the-job exposures. Labor legislation has increasingly excluded the young from these very real exposures, and economic conditions have limited part-time and summer work opportunities. Experiential learnings have, so it seems, decreased over the years. As this has occurred, education has tried to fill the void by adding to the informational channel. Although actual work provides *real* experience, life-like experiences of a simulated nature can be planned. Through a simulated work environment, work situations and work role relationships and responsibilities can be experienced. Whether real or simulated, there are other strategies we can learn to employ to provide the individual with experience in the actual dynamics of work. Field visits to work sites may provide a basis for experiential learning. Classroom life also offers an opportunity for such experiences. Many day-to-day classroom tasks involve activities and requirements much like those carried out in job situations. School involves data, people, and things, and the orientations of work can be found in the demands of the school as well as on the job. In school, deaf students engage in work functions associated with data, people, and things. Schoolwork demands are real and an individual's experience with these tasks, with the demands and pressures of completing these tasks and with the nature of the conditions in which the tasks must be accomplished, can be converted into meaningful experiential learning.

CREED career education program activities

The CREED career education program model provides for various instructional activities which enhance the four learning channels. Five component areas of career learning-maturation are utilized to implement the model: (1) vocational gaming, (2) making field trips, (3) learning about the work functions, (4) using career information, and (5) clarifying work values and attitudes. These components have been described by Munson, Hoag and Howard (1973). Materials have been developed for use with deaf students in each of these areas.

Research results from the pilot use of the program materials have shown them to significantly enhance the language development of deaf learners and change some work values with no negative effect on self concept scores. Teacher and staff attitudes toward career development tended to be positively influenced when the program was being used in their school, even when some of the staff were not actually involved in using any of the component materials. Student testimonial evidence suggests that deaf learners benefit greatly from a program of activities stressing career insights and self awareness (Munson and Egelston, 1974).

The further testing of the program in seventeen schools for the deaf across the United States will be completed and reported with the results of the in-service training program which is now concluding at the University of Rochester.

The firm base from which career education for deaf learners can be practiced has been demonstrated through the implementation of a program which binds the common elements of intellectual development, self concept enhancement and career learning-maturation.

REFERENCES

DeFleur, M. L. Occupational roles as portrayed on television, *Public Opinion Quarterly*, Spring, 1964, 28, 57-70.

Hansen, S. L., and W. W. Tennyson. A career management model for counselor involvement, *Personnel and Guidance Journal,* May, 1975, 53 (9), 637–45.

Jones, G. B., et al. "Planning, Developing and Field Testing Career Guidance Programs," Palo Alto, Ca.: American Institute for Research, 1972.

Krothwohl, D., et al. *Taxonomy of Educational Objectives, Handbook II. Affective Domain.* New York: McKay, 1964.

Munson, H. L. *Foundations of Developmental Guidance.* Boston: Allyn and Bacon, 1971.

Munson, H. L. A Paradigm for Vocational Learning-Maturation, University of Rochester, Unpublished paper, 1971.

Munson, H. L. and J. C. Egelston. *Career Development in the Education of the Deaf* (Final CREED Report) University of Rochester, October, 1974.

Munson, H. L., R. Hoag, W. J. Howard. *Career development in the education of the deaf*: A program model, *American Annals of the Deaf,* October, 1973, 118 (5), 592–600.

Super, D. E. *The Psychology of Careers.* New York: Harper and Row, 1957.

IMPLEMENTATION OF CAREER EDUCATION CURRICULUM AT MSSD

Richard Steffan, Social Studies Instructor, Model Secondary School for the Deaf, Washington, D.C.

During the past year, the Model Secondary School for the Deaf has been integrating career education into its total school program. This process of integration has been aided by a contractual agreement between the MSSD and the Center for Vocational Education through the National Center of Educational Media and Materials for the Handicapped at Ohio State University. The project is funded by the Bureau of Education for the Handicapped, U.S. Office of Education. The Center for Vocational Education was selected as a resource base for the MSSD Career Education Project because of its expertise in developing career education programs and materials for hearing schools throughout the nation.

The outcome of the relationship between the MSSD and CVE has been the development of four related programs in career education. The programs are: orientation to career education, curriculum unit implementation, career planning and guidelines for developing MSSD career education programs.

Today, the discussion will center on two of the four programs: Curriculum Unit Implementation and Career Planning. The orientation to career education program is a one-day staff development workshop which discusses the history, rationale, purposes and strategies related to career education. The guidelines for developing MSSD career education programs are still in the developmental stage.

Curriculum unit implementation at MSSD has been occurring since the fall of 1974. The faculty and staff of MSSD were asked to review approximately twenty CVE curriculum units which could then be narrowed to thirteen units for adaptation. The units cover a wide range of subject areas including social studies, mathematics, home economics, pupil personnel services (counseling), drama, English and science. The units are first field-tested at MSSD and are further revised, by CVE, based on data gathered in the MSSD class setting.

The units contain teacher guides, student materials and a variety of interesting activities such as role-playing, simulations and games.

They are visually-oriented rather than print-oriented. Many very graphic drawings have been included in the student workbooks.

CAREER EDUCATION UNITS SELECTED FOR ADAPTION BY MSSD–CVE

Unit and Department

1. Natural Resources—Social Studies.
2. Industrial America—Social Studies.
3. Play Production—Drama.
4. Social Awareness—Pupil Personnel Services.
5. Recreation and Entertainment—English.
6. Careers in Technology—Social Studies.
7. Career Exploration in the Physical Sciences—Science.
8. Berries, Gold and Credit Cards—Math.
9. Length and Area—Math.
10. Your Health and Your Job—Home Economics.
11. Grooming for Careers—Home Economics.
12. Understanding Self—Pupil Personnel Services.
13. Biases in Occupations—Mini-School.

One unit was pilot-tested this year in a social studies class. The Natural Resources unit was integrated into an existing course called Introduction to Geography. Two major parts of the unit are the group activities and a student workbook. In the group activities, students view slides showing natural resources, play games which help them recognize and categorize natural resources and go on a field trip to the Maryland countryside to identify natural resources and land features.

In the workbook students learn about occupations and people who work in occupations related to natural resources. In addition, the workbook includes skills development in map-making, decisionmaking and problem-solving. A final activity is the preparation of a report about all the information gathered in the unit and to present the report to the class.

This specific unit was well-received by the seven students involved in the first-test. They offered many helpful suggestions to the teacher for improvement of activities. Their reactions and the reactions of the teacher to the unit will be considered in the revision process which is now being conducted by the Center for Vocational Education.

How can the units help students acquire information about the world of work? There are five goals for the units in this area:[1]

1. to recognize the contributions of occupations to society and individuals;
2. to become aware of the many reasons why people work;
3. to become aware of the goods and services provided by workers;
4. to become aware of the variety of occupations in the world of work;
5. to become aware of the ways in which language arts skills are used in the world of work.

In addition, the units relate to goals which help to develop language skills and a positive self-concept for each student.

The second program which has been developed this year is the Career Planning Program. This program is related to the five-year goal of the MSSD which is that.

---

[1] Center for Vocational Education, "An Orientation to Career Education," May 1975, 19–20.

Every MSSD graduate will have participated in a comprehensive career planning program, developed a post-secondary career plan by the end of the senior year and for those students who so desire, will have developed a marketable skill.

The Career Planning System, as envisioned by the MSSD staff and by the Center for Vocational Education will begin with a student's entry into the MSSD program. The hope is that the student will have come to MSSD already familiar with career education concepts learned in the lower grades. His career planning will not end with graduation from MSSD for career development is a life-long process which, once learned, theoretically will have been internalized.

Career planning is the process of making occupational decisions based on adequate information. In the career planning system, each student acquires information and learns how to use information which relates to important career decision-points such as selecting an occupation, going to a college, changing a job and so on.

"There are four major goals for career planning at the secondary level: (1) the student will begin to clarify his self-concept; (2) the student will begin to understand the interrelationships among occupations and to relate this structure to himself; (3) the student will begin to develop inquiry and problem-solving skills; and (4) the student will begin to assume responsibility for career planning."[2]

At the secondary level, students should be able to determine personal interests, investigate occupations to help clarify personal interests, identify high school courses which can help to develop personal interests, develop a post-secondary plan and, if desired and appropriate, obtain a marketable skill.

The Career Planning System to be developed jointly by MSSD and CVE will follow this model:

The student planning log serves numerous functions in the career planning process. In the log, students will:

1. keep interest surveys which help the student in selecting materials;
2. answer questions about the probe books;
3. answer questions related to each brief and activity designed to clarify self-concept; and
4. compile all career information needed for determination of high school programs, job entry and/or continuing education.

A final purpose of the log is to provide teachers and counselors with a comprehensive record of the student's career planning program. The planning log is probably the most important component in the career planning program since it provides the base for the student's comprehensive career plan.

The career planning process is to be continually recycled with each student until he/she has determined a possible career choice. During the senior year, students will be channeled through an intensive career planning process which will include group and individual counseling, work experiences, guidance concerning post-secondary training opportunities, field experiences related to occupational-choice and course work which will prepare the student for the world of work.

The past year has been an exciting one for MSSD staff involved in the development of a career education program at MSSD. The most important time in the career education process is yet to come. Beginning in August, the students will be introduced to the program. The success or failure of the venture will be determined by the students themselves and how well they meet the objectives established for the planning system.

---

[2] *An Orientation to Career Education*, 23–24.

BIBLIOGRAPHY

Center for Vocational Education, *Career Planning Model*, May, 1975.
———, *An Orientation to Career Education*, Discussion Guide, Revised Version, May, 1975.

CISAG—A COMPONENT IN CAREER EDUCATION

Edward E. Corbett, Jr., Community Education Coordinator,
Margaret Sterck School for the Deaf, Newark, Del.

One component in career education program that enhances the involvement of hearing impaired students in assessing their knowledge about themselves and their world is the CISAG (Career Insight and Self-Awareness Games). The games in the CISAG package encompass the four channels essential to the learning theory—the self, the conceptual, the informational, and the experiential channels. Briefly, these channels define:

THE SELF—Who am I?
THE CONCEPTUAL—What do I want to know?
THE INFORMATIONAL—What do I know?
THE EXPERIENTIAL—What can I do?

The CISAG games were developed at the University of Rochester and they are as follows: Life Goals; Interest Continuum; Life Situations; How I See My Abilities; Interest Triangle; and Data-People-Things Puzzle.

The games are self-explanatory for they involve the six game-like interactions in vocational areas. The games provide opportunities for the hearing impaired children to discuss, discover, explore, and assess their preferences and feelings regarding interests, life goals, work function behaviors and abilities. The games help encourage the students to share their reactions and foster cooperation in achieving better understanding of themselves.

The CISAG has been adopted to meet the immediate needs of the hearing impaired children. What enhances the gaming process is the five communication techniques that help bring about self-awareness process.

The techniques: (1) Listening; (2) Reflection; (3) Clarification; (4) Questioning; and (5) Seeking examples.

The language development can be fostered when the five communication techniques are being utilized. Not only is the language development being utilized, the thinking processes are being put to work when the games are being played. The games do utilize the following thinking processes: (1) Classifying; (2) Observing; (3) Interpreting; (4) Hypothesizing; (5) Summarizing; (6) Comparing; (7) Criticizing; and (8) Imaging.

Career education is a process whereby students are being prepared for the world of work. With the CISAG games, we can better prepare our hearing impaired children for life after school—these children will be more aware of both themselves and their environment, especially the working environment. It means that these children will grow into adults with better concepts of themselves—who they are and how they behave. This is but one component in career education and it is the component that spells the success of career education programs for the hearing impaired.

A COMPARATIVE STUDY OF ACADEMIC ACHIEVEMENT BETWEEN HEARING IMPAIRED AND NON-HEARING IMPAIRED STUDENTS AT CALIFORNIA STATE UNIVERSITY, NORTHRIDGE

Harry J. Murphy, Ph. D., Assistant Director, Center on Deafness, California State University of Northridge, Northridge, Calif.

Purpose

The purpose of this study was to determine if there was a significant difference in academic achievement—Grade Point Average—between Hearing Impaired (HI) and Non-Hearing Impaired (NHI) students at California State University, Northridge. A previous study (1974) found no significant differences between HI and NHI freshmen, sophomores, and seniors, but significantly superior performances of Non-Hearing Impaired juniors and graduate students.

Hypotheses

The general hypothesis formulated in this study was: Non-Hearing Impaired students' academic achievement—Grade Point Average—is significantly superior than that of Hearing Impaired students at CSUN. More specifically:

1. Freshmen NHI GPA will be significantly superior than freshmen HI students.
2. Sophomore NHI GPA will be significantly superior than sophomore HI students.
3. Junior NHI GPA will be significantly superior than junior HI students.
4. Senior NHI GPA will be significantly superior than senior HI students.
5. Graduate NHI GPA will be significantly superior than graduate HI students.

Method

Sampling of observations.—Observations (GPA) included the entire population of Hearing Impaired students. Subjects were categorized by class level: freshmen, sophomores, juniors, seniors, graduates. Their grade point averages were recorded for spring semester, 1974. Again, maintaining the same categorization of subjects, grade point average scores were recovered for fall semester, 1974. Those subjects which had two scores, one for each semester, were reported as two distinct observations. This approach, the sampling observations method, explains how the number of observations were determined for the Hearing Impaired subjects listed under each class level.

The NHI observations were drawn at random using the last two digits of the student file number for the spring and fall semesters, 1974. These observations were drawn after the Hearing Impaired observations were determined to maintain equal numbers of observations in each group. The sample of observations in each group was as follows:

	Hearing impaired	Non-hearing impaired
Freshmen	40	40
Sophomores	23	23
Juniors	44	44
Seniors	25	25
Graduates	75	75

Design.—The dependent factor of concern was GPA, on a scale ranging from 1–4, with 4 being the highest.

	Points
A	4
B	3
C	2
D	1
F	0

Grade point average was taken for two semesters, spring and fall, 1974, and reported independently for each student. The independent variables were the Hearing Impaired and Non-Hearing Impaired groups of students.

Separate analysis of variance (ANOVA) was performed for each class level to determine levels of confidence. The selection of this statistical analysis was based on the assumption that the dependent factor, GPA, is normally distributed in the universe of observations from which the samples were drawn and the variances in the universe of observations from which the samples were drawn are equal. Tests were conducted to insure that the assumptions for use of the ANOVA model were met.

Results

The data were analyzed on a 3170 CDC Computer at the Computer Center, California State University, Northridge.

Table 1 shows the obtained results of the analysis of variance for HI and NHI freshmen. As indicated, the difference in GPA between these two groups was not statistically significant. Hypothesis 1 was not supported by the obtained results.

TABLE 1.—ANALYSIS OF VARIANCE FOR HI AND NHI FRESHMEN

Source	df	MS	F	Probability
Between groups	1	0.1505		
Within groups	78	.3966	0.380	0.5468
Total	79	.5471		

Table 2 contains the achieved results for the sophomore groups sampled, as observed, no statistically significant difference in performance between the groups was noted. Thus, Hypothesis 2 was not supported.

TABLE 2.—ANALYSIS OF VARIANCE FOR HI AND NHI SOPHOMORES

Source	df	MS	F	Probability
Between groups	1	0.5788		
Within groups	44	.5856	0.988	0.6735
Total	45	1.1644		

Table 3 deals with students in their junior year, indicating that there was no statistically significant difference between the Hearing Impaired and the Non-Hearing Impaired students. However, the data showed a tendency of the NHI group to perform better than the Hearing Impaired.

TABLE 3.—ANALYSIS OF VARIANCE FOR HI AND NHI JUNIORS

Source	df	MS	F	Probability
Between groups	1	1.1615		
Within groups	86	.3824	3.038	0.0812
Total	87	1.5439		

Table 4 presents the results for seniors; no statistically significant difference resulted from the comparative analysis of these groups. The data did not provide support for Hypothesis 4. However, there was a tendency among the HI group to perform better than the NHI sensiors.

TABLE 4.—ANALYSIS OF VARIANCE FOR HI AND NHI SENIORS

Source	df	MS	F	Probability
Between groups	1	0.3978		
Within groups	48	.3158	1.260	0.2665
Total	49	.7136		

Table 5 summarizes the results for graduate students. The data show no statistically significant differences between the groups. The data do not provide support to Hypothesis 5.

TABLE 5.—ANALYSIS OF VARIANCE FOR HI AND NHI GRADUATES

Source	df	MS	F	Probability
Between groups	1	0.1887	0.959	0.6698
Within	148	.1967		
Total	149	.3854		

TABLE 6.—MEAN GPA'S, STANDARD DEVIATIONS FOR HEARING IMPAIRED AND NON-HEARING IMPAIRED STUDENTS—ALL LEVELS, SPRING AND FALL SEMESTER, 1974

	Hearing impaired			Non-hearing impaired		
	N	Mean	S.D.	N	Mean	S.D.
Freshmen	40	2.546	0.650	40	2.63	0.609
Sophomores	23	2.498	.873	23	2.723	.640
Juniors	44	2.493	.699	44	2.723	.525
Seniors	25	2.761	.571	25	2.582	.553
Graduates	75	3.343	.448	75	3.414	.440

Discussion and conclusions

The obtained results clearly indicate that academic achievement—Grade Point Average—of CSUN Hearing Impaired students, when compared with CSUN Non-Hearing Impaired students over two semesters, was of the same magnitude on all class levels. The performance of Hearing Impaired students in integrated undergraduate and graduate programs for all class levels exceeds the minimum academic standards set by the university. The increased performance of the Hearing Impaired students lends empirical support to the concept of integrating the Hearing Impaired student in regular undergraduate and graduate academic courses.

The present study demonstrates that Hearing Impaired students achieve at approximately the same level as Non-Hearing Impaired students when support services (interpreting, counseling, notetaking, tutoring) are provided.

REFERENCES

Hays, William. *Statistics*, New York: Holt, Rinehart and Winston, 1965.

Li, Jerome, C. R. *Statistical Inference I*, Ann Arbor, Mich.: Edwards Brothers, Inc., 1964.

A TIME MODEL: COUNSELING DEAF STUDENTS IN TECHNICAL-VOCATIONAL EDUCATION

Patrick W. Duggan, Counselor, Deaf Education Program, St. Paul Technical Vocational Institute, St. Paul, Minn.

Counselors often fail to define their area of expertise, responsibility, and specific objectives. This lack of communication leaves people with vague notions about the function of a counselor. The purpose of this paper, therefore, is to communicate, (1) the responsibility and, (2) the techniques of the counselor for deaf students in the specific integrated setting of the St. Paul Technical Vocational Institute (TVI). Such counselor roles and techniques must meet the needs of deaf students receiving services, yet be responsive to the goals of the technical-vocational program itself. The major emphasis of technical vocational education is salable skill training and counseling of deaf students in these same postsecondary programs will necessarily be directed to achieving this objective.

Counselor responsibilities

The notion of accountability for time usage greatly assists counselors in explaining what they do and examining whether their time is adequately spent according to student needs and program goals.

Therefore, the following time accountability chart of eight broad categories of activities serves as an ideal model to specify areas of responsibility in meeting both student needs and program objectives in a technical-vocational program.

Activity:	*Amount of time, percent*
1. Vocational services: assessment of abilities, survey of needs and interest, vocational information on a variety of careers, job exploration and participation in choosing realistic training objectives	30
2. Educational services: follow-up of students' progress in chosen training and adjustment of choice or major training schedules to assist students in achieving their particular objectives	10
3. Behavioral—adjustment service: assisting students to cope with personal, interpersonal and group expectations of present and future environments	15
4. Administrative services: reviewing admissions, coordinating of student financing, assisting with housing and discipline regarding student infraction of program regulations	10
5. Placement services: contacting employers, job development, assisting students in job interviewing, application and resume planning and follow-up of placement progress	10
6. Consulting services: informational exchange and contacts with teachers, referring vocational rehabilitation counselors, parents and school administrators and public and private agencies. These services also include informing both the total deaf community and local hearing community of type and scope of services available	15
7. Professional services: planning curriculum to provide effective student services, attending professional conferences, professional reading and collecting descriptive data on delivery and outcome of services	5
8. Clerical activities: writing reports, scheduling of students, hosting visitors and insuring proper referrals for appropriate practical needs such as health or insurance concerns	5

These eight services and activities are counseling responsibilities in a technical-vocational setting. The time allocated is the combined focus on total needs of deaf students and emphasis of the program itself. The responsibilities are further ranked in order of priorities, although amount of time allotment does not necessarily correspond with the rating of importance for the various services. This discrepancy is based on the reality demands of the individual services provided.

Vocational services

The greatest proportion of counselor time in technical-vocational programs is devoted to vocational services and providing information. Evidence suggests that many deaf students, prior to attending technical-vocational institutes, have been exposed to limited or stereotyped vocational choices. Most deaf students attending postsecondary programs like the St. Paul Technical Vocational Institute are unable to name more than 10 to 15 occupations, although more than 23,000 job titles are listed in the Dictionary of Occupational Titles.

Acquiring vocational information is difficult for deaf students with reading abilities at the 4th and 5th grade levels. These students cannot extensively make use of most conventional methods of obtaining occupational information such as is found in brochures and manuals. Job or training choice is generally limited to shop interest in high school, parent employment, and knowledge of a few local community workers.

To offset this lack of information, the St. Paul Technical Vocational Institute utilizes a program of individual and group vocational exploration prior to choosing an area of study. This program provides a planned inquiry into the world of work with a wide review and examination of different occupations.

Students obtain further knowledge by visits, explanations and selected try-outs within forty different areas of training at St. Paul Technical Vocational Institute itself. Three other area technical-vocational institutes in the metropolitan area that are routinely visited offer information and potential training in over 160 separate training stations. Students also visit local companies through field trips designed to expose students to actual working conditions.

Concurrent with the whole process of this information and exploration is counselor assessment of abilities through testing and evidence of classroom capabilities in subjects related to specific areas of training. Individual and group sessions are used to analyze the needs, interest and personal characteristics of each student. These meetings become the focus for students to make final training decisions based on the concrete information and feedback of the training options available.

Deaf students can greatly profit from media services and a federally-funded media program for deaf students is a part of the St. Paul Technical Vocational Program for Deaf Students. Vocational exploration packages (VEP) have been developed for use by counselors that offer information regarding specific jobs with combined units of "hands-on" experience and learning assessment. These mediated packages capsulize much of the vocational services regarding the exploration and informational process. Included are job areas, related jobs, analysis of job activities, levels of jobs, training requirements, future trends, location, hiring practices, pay, benefits, and special features of jobs such as union affiliation.

Educational services

Relatively little total time is allotted to educational counseling services after a student is in an area of study. This is attributed to the extensive exposure students had in a wide variety of training areas during the exploration phase of ability and interest assessment. During the Preparatory Program in St. Paul TVI, 35–40% of the deaf students either change their original vocational decision or formulate a decision for the first time. Because of vocational exploration, actual entrance into a major area of training has encompassed prior decisions regarding other alternatives of training and the final choice is generally appropriate and within the confines of a student's ability.

Those educational services that are provided are in the realm of routine follow-up of a student's progress. This assures early intervention if adjustments in class schedules or course content appear necessary.

Educational follow-up is provided from meetings with instructors and from student's own request for assistance if adjustments are necessary. Moreover, a highly effective follow-up resource for the counselor is review of periodic written reports from interpreters working in the student's major are of training.

Behavioral adjustment services

Personal-social counseling in any setting is one of the least clear and most misunderstood areas of counseling. The misunderstandings tend to arise from the observer due to vague notions of what the counselor should do and limited information from the counselor regarding realistic objectives that can be accomplished. A teacher may want a counselor to find out what is "wrong" with a student and correct it, improve a student's work or attitude, or absolve teachers from any further responsibilities with a student. The counselor, on the other hand, may fail to specify to what extent effective help can or cannot be given to a student in a case such as poor work habits.

Time devoted to behavioral adjustment in the St. Paul TVI Program is generally limited to behavioral objectives that will be related to job performance.

This includes assisting students to form their own objectives for present training and future work performance. Students may have difficulty with absenteeism, lateness, getting along with co-workers, getting along with supervisors, quality and quantity of work, to name a few areas where behavioral adjustment is necessary to help a student learn to cope with a particular environment.

Personal concerns, dependency, and social expectations are also areas that receive attention. In a technical-vocational setting, many of these concerns are most effectively worked with in relation to occupational goals and demands of work.

A reasonable and realistic objective for personal-social counseling is to assist students to recognize conflicts and frustrated attempts to achieve goals. From this premise, students have an opportunity to work on solutions, plans and decisions that promote independent self direction.

Value clarification is an emerging technique of identifying real personal goals that offers potential direction to many deaf students in deciding life goals. Through this method, students are forced to examine what their present priorities are and what modifications are necessary to achieve goals.

Some counselors may use a directive or authoritative approach in helping students while other counselors may use a more indirect or reflective approach to assist students to clarify their concerns. Most counselors in technical-vocational settings have received training in many different theories of counseling and tend to pick those techniques that appear most effective for individual student needs. In reality, most counselors use different elements of various counseling theories and are more accurately characterized as eclectic.

Whichever method is used, behavioral service is basically an encounter in which the counselor helps the student begin to work out the problems or concerns that hinder effective functioning in a particular environment.

Administrative service and procedures

A certain amount of administrative responsibility is shared by most counselors in technical-vocational programs. This service may be indirectly related to students but directly affects their relationship to the program. Such services would include responsibilities for admissions, assisting with plans for student financing, making housing arrangements, helping plan student schedules and interpreter needs and supervising counseling interns.

An unusual administrative area for counselors in general but a required responsibility in some technical-vocational programs is administering of discipline to students who violate program regulations. This is necessary for those students who are not interested in the serious business of training for a skill or lack appropriate identifiable motivation to profit from behavioral counseling. In fairness to all students, rules need to be enforced and consequently effected. This is basically a limit setting procedure and a counseling role the students must recognize as enforceable.

Placement services

Greater accountability for success of deaf students in a technical vocational setting is achieved if vocational choice and placement activities are closely related. The counselor has a meaningful accountability of the appropriateness of a specific vocational training area by the actual success a student has in obtaining a job.

Placement services for students who are in the community include contacting employers, assisting in job interviews, interpreting assistance application and resume planning and follow-up of placement progress. The follow-up phase is very critical expecially in cases where job modifications may be suggested to optimize a student's job performance.

Students who go to their original home community are prepared with resumes, prior contact with local vocational rehabilitation agencies, and the TVI counselor's telephone number for employers to call collect.

Consulting services

Consulting services are responsibilities of the counselor both within the technical vocational program and to the total community.

Consulting services within the program may be necessary with preparatory instructors, major area instructors, administrators, interpreters, or any combination of these groups to assure that the capabilities and needs of individual students are being served.

Consulting services outside the program will have broad informational objectives regarding the scope and purpose of integrated technical-vocational programs for deaf students. Target populations for this service include political groups, educators, vocational rehabilitation counselors, medical groups, legal groups, parents, teachers, school administrators, and the total deaf community.

Professional services

Counselors participate in various forms of professional activities to develop or exchange ideas regarding how to best meet the needs of deaf students in a particular setting. Professional activities include formal class work, professional reading and writing, curriculum planning, attending professional conferences, and doing research on effectiveness of services.

Clerical activities

There are many details of service that counselors should not overlook in providing full service to deaf student in the technical vocational programs. These include progress reports on students, program scheduling, processing funds, managing time, hosting visitors and finding appropriate referrals for practical needs that may range from bus service to health or insurance concerns.

Conclusion

The eight areas of counselor responsibility constitute the major range of services that are provided in the St. Paul Technical Vocational Institute. In the model of responsibilities and time allotment, the most time is devoted to vocational informational services as this concrete assistance is the most significant reason why deaf students in a technical-vocational program contact counselors in the first place. Vocational services, educational services, behavioral adjustment services, and placement services are direct student contact activities and should utilize approximately 65 percent of the counselor's time. The other 35 percent of time should provide indirect student services in the form of administration, consulting, professional and clerical activities.

COUNSELING TECHNIQUES FOR DEAF STUDENTS WITH MINIMAL LANGUAGE SKILLS

Patricia Scherer, Ph. D., Associate Professor, Department of Communicative Disorders, Northwestern University, Evanston, Ill.

Today I would like to present a case history of a young girl who entered the Northwestern University rehabilitation program for young adults with serious language deprivation in October, 1972, with a psychiatric diagnosis of probably chronic schizophrenia. I have selected this particular case to illustrate the following points:

1. Accurate diagnostic evaluation of psychopathic disorders is exceedingly difficult when the individual has little or no communication.
2. Trauma concerning communication deficiencies are the basis of the problem of many children who are currently labeled as behaviorally disordered.
3. Counseling techniques can be used successfully with individuals who have minimal language skills.
4. A new approach which I shall for purposes of the presentation refer to as communication therapy can be helpful with deaf children with severe behavioral problems.
5. Appropriate techniques in communication therapy can be given to a sensitive and knowledgeable classroom teacher.

Background Information

The young girl I wish to acquaint you with today was born in March, 1956. Deafness was suspected at 12 months of age when the mother began to worry because her daughter Susan was not walking or talking. The child was taken to the pediatrician who diagnosed the problem as mental retardation. However, the grandfather consistently maintained that the child was not retarded but deaf and at two and one-half years of age Susan was taken to an otologist where she was diagnosed as profoundly deaf. At this age the mother described the child in the following manner:

Up until two Susan was happy although she never wanted to be held and didn't really relate to people, At two, she started to withdraw and became a sad and lonely child. Susan didn't sit until nine months or walk until 18 months and then she was always falling and walking into walls. She played very well alone. She loved blocks and books. She would build intricate bridges and cities with her blocks and look at her books for hours. She was not afraid of people and would go to them but it was like "she wasn't there." At two and one-half she was badly frightened one night by a shadow accidentally projected on her wall by some visitors. Upon waking and seeing the shadow Susan began to scream. She was removed from the room and refused to ever enter it again. Because of the incident, the family was forced to move from the apartment and until age eight Susan slept every night on the floor beside her parents' bed.

At age four she entered a private school program for deaf children. She was tested before the school accepted her and did very poorly. The Leiter International Performance Scale was administered and Susan attained an intelligence quotient of 74 but demonstrated a social age of 4.2 years and a social quotient of 98. Behaviorally the school described Susan as an immature child who controlled the family by refusing to eat. She appeared emotionally immature and demonstrated an excessive desire to please.

The family was described as uncertain and conflictual. The father seemed unable to tolerate the noise of his three children and was very strict demanding peace and order at all times. The mother was uncertain about child expectations and was apparently unable to cope with the additional problems imposed by deafness. Although throughout the school age years, it was frequently recommended that the family receive counseling, they consistently refused help of this kind. At age seven Susan was dismissed from the private school due to her inability to profit from the program. She was enrolled in the public day school program for deaf children. She was again evaluated and this time an IQ score of 75 was obtained on the Weschler Intelligence Scale for Children (WISC) with the coment "not valid due to poor motivation." During the first few months a highly structured approach was utilized by a teacher who really liked Susan. The child began to respond and a quarterly report which reads as follows was found in the record:

"A delightful child who is successful with a structured approach—anxious to please." This teacher, due to sudden illness, was forced to leave and Susan was placed in a different class. From this point on behavior and learning rapidly deteriorated.

In 1964 the report card indicated all failures with applications skills rated very low but social skills rated average. During this year, the records indicate a comment from the mother stating "The children in Susan's room are too emotional and make her immature. You have to get strict with Susan." In 1967 Susan came to school with deep marks on her arm and reported that mother was angry with her.

By 1968 the behavioral problems were becoming so overt that Susan could no longer be managed in a public school. She was referred for testing and the following results were obtained.

Borderline IQ.

Poor visual memory and sequencing ability.

Some visual perceptual problems.

Manual communication should be used and vocational training stressed.

Mother would benefit from counseling.

Upon the school's recommendation, the parents visited a residential school in order that Susan could obtain instruction through manual communication. Mother liked the school but didn't want Susan to go although she finally agreed.

The parents were referred for counseling and went to one session. The report contained the following comments made by the mother:

> You and I and everyone else can't stand her. Some children need a good whipping * * * How much more can I take? * * * Susan has no friends, hearing or deaf * * * My husband should never have been wished off on me * * *"

The parents attended only one counseling session and expressed the opinion that Susan was the person with the problems who needed the assistance, not they.

Initial days at residential school were fairly successful but behavior soon began to interfere. In 1972 the problems had reached such a level that a psychiatric evaluation was ordered with the following results:

> Dull normal intelligence with inconsistent and confusing changes of attention.
>
> Academically functions at the 1st and 2nd grade level.
>
> Extremely young looking and very difficult to communicate with. She could answer simple questions such as "What is your name?" "How old are you?" However, this occurred only when sign was utilized. No speechreading ability or speech was noted.
>
> The drawing of a person was primitive, mildly peculiar and less organized than the 1970 drawings.
>
> She was unable to draw self in her drawing of the family.

Behavioral comments:

> Does not relate to peers.
>
> Relates to adults in a dependent relationship only.
>
> Violent temper outbursts from minor episodes such as bumping someone in the hall.
>
> Demonstrates paranoid thinking.
>
> Involved in sexual play with boy with apparent lack of realization of consequence.

Comments regarding parents:

> Family insists Susan can perform some 7th grade math and language that her sister has. They feel resistance explains Susan's learning problems. Parents are tense and overtly rejecting and show her little or no affection. They care for her needs minimally and appear to wish her out of the home. They deal dishonestly with her, hiding things from her and yet at the same time see her having considerably more capabilities than she does.

Conclusions:

> A girl with severe communication problems who was totally inappropriately educated in early years. Her position in the family is unclear and she receives confusing messages from the family. She is a concrete thinker, impulsive, highly paranoid and emotionally immature. Her object relations are at a symbiotic level and she demonstrates lack of retention and poverty of thought. The diagnosis is a probably chronic schizophrenic complicated by deafness.

Recommendations:

> Residential school for psychotic deaf.

Since such a placement was unavailable Susan was referred to the Division of Vocational Rehabilitation who in turn referred her to the rehabilitation program at Northwestern University.

When Susan enrolled, specific evaluation results indicated the following facts:

Chronological Age—16.5.

Audition—Profound sensorineural hearing loss. Fragmentary audiogram with no discrimination abilities apparent. Due to lack of auditory stimulation through amplification, the prognosis for hearing aid usage was very poor.

Mental Ability—The Nebraska Hiskey Test of Learning Aptitude indicated a range of abilities from 6-0 to 13-6 years with an overall learning quotient of 54.

Social Development—Vineland Social Maturity Scale; Social Quotient 67.

Language Development—Cannot speechread; no speech; through sign responds to simple commands, directions and questions; expressive skills very poor; one or two words ("brother one" "dress school" "play friend"); little or no fingerspelling observed; written language below norms of age 7.

Academic Function—Reading—Metropolitan Primary II—2.6; Math Elementary—4.6.

Visual Motor Development—Beery-Buktenica Test of Visual Motor Integration—7-8 years.

Gross Motor Development—12 years.

Emotional Development—House-Tree-Person Drawings revealed insecurity, dependency, vagueness and attitudes of suspicion.

There was little eye contact and Susan could not work alone, demonstrating the need for constant reinforcement.

Following the evaluation, Susan was enrolled in the young adult program. Therefore, it was decided that Susan's program must be on an individual basis, and that the lack of communication skills would preclude formal counseling at this time. At the pre-enrollment staffing, the staff psychologist suggested that Susan's greatest need was to establish trusting relationships with people. Eye contact and social behavior slowly improved but learning was poor and communication remained the same. Excerpts from quarterly reports indicate this progress:

Fall 1973—"Susan's expressive language is probably comparable to a child two years of age. Her expressions consist of individual concepts combined with natural gesture. In this way, she communicates simple ideas."

Winter 1974—"Working with Susan has been a very frustrating experience. She has been under strong medication most of the time and 'not in this world.' However, she has days during which she is quite lucid and interacts favorably. It is difficult to evaluate communication skills. Her thinking is usually fixed on a specific thing and she cannot be moved from it. It is doubtful that she acquired new vocabulary skills. Communication skills are still inadequate for counseling."

Summer 1974—"Susan's attitude is now positive and cooperative. Her manners and social skills have improved but this is an area which still requires much work."

Although little academic progress had been made and little or no progress in the development of communication skills had occurred, it was decided to keep Susan in the program for one more year before looking for a sheltered workshop placement. In the fall it was decided to initiate counseling. Because of the lack of knowledge of techniques in counseling non-verbally with adults, the approach was necessarily a trial and error one. A brief synopsis of interaction during early treatment stages is as follows:

Clinician. I tried to explain that this was her hour to talk about anything she wanted to talk about. Susan had difficulty with this and initiated the following conversation that she utilized in a perseverative manner for several months.

Susan. Northwestern year this. Workshop year next. Then marry.

Clinician. You marry? Who?

Susan. Tom.

Clinician. Tom live where?

Susan. Indiana—moved before—many—happy—come get.

Tom was a fantasy that existed in Susan's mind which she used to assure herself of future security.

Since this approach was not productive, I then tried a role playing technique. However, this too was initially unsuccessful because Susan's experiences appeared to be too limited to provide for meaningful interaction. The following week Susan arrived at school very upset over an event that had occurred at home during the weekend. She wanted to communicate but her limited vocabulary prevented her from doing so. It was at this point that it became obvious that communication must occur irrespective of the form it took if any progress was to be made. The two of us struggled for hours over the understanding of this one incident. Pictures were used, body language and role play, along with a few signs and gestures which were also helpful. By the end of the session, I had understood that in church on Sunday all the people in the church had laughed at her and had made fun of her and she had gone home crying. To review what had happened for final clarification, I drew two pictures on the board—one of mother, and I stood next to that and one of Susan and I placed her next to that drawing. I drew a balloon as utilized in cartoons to indicate speech and wrote the words, "Why are you crying, Susan?" Susan turned and drew a balloon from the mouth of the drawing representing herself and wrote, "Because Susan is sad. People laugh at Susan." Since no one had ever observed Susan utilize a complete sentence in written form, I was shocked to note complete sentences in perfect grammatical structure.

From this point on Susan was cooperative and utilized writing as a means of communication. She still persevered on many incidents in her life and always insisted she had been seriously hurt at age two and at age eleven. She claimed that she could not talk because the injury at age two had destroyed her voice. A careful check of records indicated no illnesses or injuries had occurred at this time and we, therefore, concluded that these incidents were more than likely symbolic in Susan's mind. Since any attempt to elicit speechreading or speech resulted in failure and terror on Susan's part, it was decided to pursue this area. Questions were asked in writing about home life in attempt to gain a better understanding of Susan and her problems. However, Susan was reluctant to discuss this topic and all that could be elicited was a jumbled message about noise-hate-stop that-try nice girl. Therefore, role playing with writing was tried again. The following is a verbatim transcription of the conversation that took place.

CLINICIAN. Draws picture of mother and Susan. Signs: I will be Mother, you are Susan. Writes in balloon from Mother's mouth: Stop that.

SUSAN. Signs: Try nice girl.

CLINICIAN. Signs: Let's change. You be Mother. I'll be Susan.

Clinician makes a lot of noise and pretends to have a temper tantrum.

SUSAN. Signs: Stop that. Bother Father. Father hate.

CLINICIAN. (Continues with noise and tantrum).

SUSAN. (Breaks from role play and signs): Stop pretend. Remember, I told you two years old sick—hospital—no voice.

CLINICIAN. Yes, I remember—You told me Susan born deaf—two years old sick and now no voice.

SUSAN. Now I tell you truth—Two years—Susan play, play, use voice, Mother say—stop that—terrible bad noise, Father not like, Be quiet, Do not use voice—Now Susan can't hear—can't talk.

CLINICIAN. Mother told Susan—stop using your voice! Mother was angry?

SUSAN. Yes—Mother hit—Mother hurt Susan.

CLINICIAN. I am sorry—Susan could not hear. Susan did not know she was making noise. Susan did not want to bother father. Susan just wanted to play and have fun.

SUSAN. Yes, right. I understand.

As a result of this conversation Susan began to make rapid gains. Another intelligence test was given at this time. Although Susan still demonstrated great fear and tension while taking the test, her scores now fell within normal limits.

Susan had many problems which she had to work through. She developed techniques of her own for doing this. The following conversations are illustrations of some of the problems faced by Susan, her defense mechanisms and the milestones that occurred during the counseling period.

One of Susan's problems was her inability to separate herself from her mother. The relation was as stated in the earlier psychiatric report a symbiotic one. Since mother was fear ridden, these fears also tortured Susan and prevented her from healthy growth and development.

CLINICIAN. Write: Remember last week we talked about water—Susan worried about water and falling.

SUSAN. Signs: Careful walking—before ice—snow—cold hurt.

CLINICIAN. Writes: Susan doesn't like cold—Susan doesn't like ice, snow, water, cold and falling.

SUSAN. Yes, cold hurt—remember afraid—little children—sled.

SUSAN. Writes: Crawl, play—fall—hurt. Walk you—how old?

CLINICIAN. 12 months—Was Susan afraid to walk?

SUSAN. Yes—fall hurt.

The following are examples of techniques utilized by Susan to work through issues. She creates a dialogue and makes the clinician the person who has the problem. She wants the clinician to solve the problem in this way.

SUSAN. Writes: Pat wants to play fun. She is laughing face. Mother hates angry. What did you hate?

In this dialogue, Susan is referring to her inability to control her anger. She has had serious outbursts of anger in which she has physically attacked her Mother. These outbursts frightened both Susan and her Mother.

CLINICIAN. Writes: When Susan is angry, she does not tell people. She keeps the anger inside. Sometimes Susan cannot keep the anger inside, it is too strong. Then Susan hits. Mother is afraid when Susan hits.

SUSAN. I understand.

About this time, Susan began writing letters. The letters were excellent and indicated she had acquired a good language base—a good understanding of syntax and a broad base of knowledge which she had kept hidden during all these years. Since she had only been exposed to manual communication for two years, it was readily apparent that she must have initially acquired language through speechreading. The following is an example of her speechreading skill.

CLINICIAN. Susan, you can lipread. You are a good lipreader.

SUSAN. No frustrated—deaf people sign—can't hear—understand—(looks very anguished).

CLINICIAN. Yes, sign is good and helps you but you can lipread too. Watch me—(no signs)—What is your name?

SUSAN. Can't.

CLINICIAN. Yes you can, watch—What is your name?

SUSAN. My name is Susan.

CLINICIAN. How old are you?

SUSAN. How are you?

CLINICIAN. Almost—one mistake—how old are you?

SUSAN. 19.

CLINICIAN. Where do you live?

SUSAN. Live—where I is one my live? I live in Chicago.

CLINICIAN. Right. That is fine. What's your father's name?

SUSAN. What is name? (getting very anxious)

CLINICIAN. That's fine—calm down—don't be afraid. What is your Father's name?

SUSAN. My father name is Donald.

CLINICIAN. That is very good but you are very nervous—why?

SUSAN. Afraid.

CLINICIAN. Why?

SUSAN. Lipread afraid.

The use of written language was an important tool for Susan. Because this medium was less threatening than direct conversation, it helped her in revealing herself. Through an analysis of Susan's written and signed communication, it became possible to identify the sensitive problem areas and to measure her growth back to a more satisfactory adjustment. The discussion of a problem or communication with a stranger would create an immediate breakdown in the language structure.

Time will not permit a complete analysis of these language changes but through this year Susan has made steady progress until she now communicates with all strangers with equal facility. Written language is still better than signed communication but it, too, is improving rapidly.

The following is analysis of Susan's language in various settings. The scoring is based on the complexity, variety and accuracy of structures used.

	Structure[1]	Productivity[1]	Total[1]	Errors (actual count)
Signed by Susan to a student in January 1975	2.6	8	10.6	9
Signed by Susan to a clinician in January 1975	4.4	13	17.4	12
Written by Susan to a clinician in December 1974	12.7	15	27.7	2
Signed to clinician with male peer present in May 1975	4.8	15	19.8	22
Written to clinician under emotional stress	3.7	11	14.7	14.5

[1] The higher the score, the better the performance.

However, her case study and analysis of language has been utilized to indicate the vital role communication plays in every child's social/emotional intellectual and academic development. Communication must occur irrespective of the mode or form that is utilized as it is the vehicle for the transmission of needs, thoughts, and feelings. This child was denied communication by all who worked with her until she became so frightened that she had almost totally withdrawn from the world about her and yet it was the strong desire to communicate that helped her once again to regain her equilibrium and begin the tedious climb toward independence and feelings of well-being.

Susan is an example of a child with a serious emotional disorder resulting from the serious problems she faced in childhood. She is not typical of most deaf children in classes for the deaf and was helped only through the combined efforts of individuals with knowledge and skills in psychology, counseling education, and communication with deaf persons.

However, educators of the deaf must become experts in communication and must be able to reach any child irrespective of his particular communication deficit. When a child can be reached, his frustration is greatly reduced and his feelings of self-esteem and security are enhanced. To acquire this skill in communication, forthcoming teachers need a specific kind of training which in most instances is presently not included as a part of teacher preparation programs. Institutions engaged in the preparation of teachers of the deaf need to more thoroughly examine this process of communication and add to the course of study experiences, knowledge, and practicum which will develop the following sensitivities necessary for communication therapy.

1. Sensitivity to the pain of a child.
2. Reduction of inhibitions during the communication process.
3. Ability to communicate basic ideas and feelings of self-worth non-verbally.
4. Ability to understand the child's communication.
5. The ability to "read between the lines," to understand what the child is really trying to say.
6. The ability to place problems in a form that can be understood by the child and to help him find a way to express possible solutions.

If a teacher can truly understand the "problem child with minimal verbal skills" and can interpret his feelings, needs, and problems through the child's unique communication system, he is well on the road to helping this child make a more satisfactory adjustment to develop more positive feelings of self-esteem.

THE EDUCATION IMPLICATIONS OF LEARNING A FIRST LANGUAGE IN SCHOOL

Raymond Stevens, Syracuse University, Syracuse, New York

A first-language cannot be taught; it must be learned. Young deaf children should not be required to learn verb tenses by rote memory, to classify words by parts of speech, to memorize word order, or to use second-order symbol systems to learn their first language. Studying the grammar of English is a pleasure for the linguist and a task for the adolescent. Learning English in an unreflective manner is a right of the child.

Unfortunately, deaf children are not successful in learning English. Their lack of success is not due to brain dysfunction, however.

> We have every reason to assume, for the time being, that the deaf and the hearing preschoolers are essentially equal insofar as their biological capacity for cognizing is concerned. This is what we would expect from our earlier consideration of the brain's relative tolerance for the substitution of sense modalities for one another as avenues for sensory input. The development of cognition is relatively unimpaired (at least up to a certain age level) if only one sensory avenue is blocked. (Lenneberg, 1972)

Lenneberg believed that "language teaching is never more than displaying our own skills in the presence of the pupil, confident that the pupil will do the rest by himself." The deaf child has to do the rest because language learning is an active process. Hearing children are not taught English by their parents; they do not require explanation of meaning or drill in pronunciation. Yet by the age of four they are relatively fluent in English.

How does this relate to the education of deaf children? McNeill (1968) has used the phrase Language Acquisition Device or LAD to describe the innate mental capacity to learn language. The LAD is a mental structure which receives a corpus of speech and creates a grammatical system. The LAD is not partial to any language. In other words all humans are born with the capacity to learn any language.

McNeill's theory can be supported with research. Brown (1973) has done an extensive review of the literature on the language acquisition of hearing children. In his book, "A First Language," he discusses approximately forty children and at least twelve different languages. He has put forth convincing evidence which shows that all children not only learn the syntax of their own language at very early ages but also shows that all children go through the same five stages of linguistic development. For example, Stage I is generally characterized by telegraphic speech where non-stressed words such as the, is, an, or . . . are left out, as in "Daddy home," doggie bite," "all gone food." Stage II is marked by the appearance of grammatical morphemes such noun and verb inflections and of "little words" such as articles, prepositions, and auxiliary verbs. Children learning Russian, Finnish, or Japanese go through the same stages. Brown s research supports McNeill's theory of an LAD. It is important to note, however, that the children who are functioning at a given level, i.e., Stage I are not all saying the same words, just the same types of words, e.g., nouns, action words.

Katherine Nelson (1973) has found similar linguistic development. Nelson has established the following order in which children acquire categories of works: (1) nouns (2) action words (3) adjectives (4) social words, and (5) function words. This process continues until age two and then syntax becomes more important than types of words acquired. She has also found a relationship between types of words acquired and personalities of children. She uses the terms "expressive" and "referent" children. "Expressive children" tend to use more emotion-feeling words while "referent children" tend to refer more to objects in their environment.

Such research indicates again the very active role that children themselves play in acquiring their language, and shows that while the process is the same, the individual child creates his own language as he moves toward adult level grammar.

Thus far, we know that all children (1) have an LAD or LAS (2) go through the same language stages (3) acquire initial vocabularies which reflect their individual personalities and interests.

Stokoe has shown that American Sign Language (ASL) is a language in and of itself. ASL contains principles of semantics and syntax inherent in all languages. Similar to all languages, ASL has signs (words) for relations, objects, feelings and qualities.

In the last few years research has been conducted on ASL as it is used and learned in social settings. Bellugi (1972) states:

> Pola's sign vocabulary seems to cover the full range of concepts expressed by bearing children of a comparable age. . . . We find in Pola's early combinations of signs the full range of semantic relations expressed by hearing children. We also find a steady increase in the length of her signed sequences that matches the increase found in hearing children. It does seem, that in spite of the change in modality, the milestones of language development may be the same.

Thus, we have gone full circle. Lenneberg said that deaf children have intact nervous systems, that the brain could stand the loss of one sensory channel. McNeill described the language learning system as an LAD, Stokoe confirmed ASL to be a language. Bellugi said that deaf children learn just like hearing children do. Therefore, deaf children have a neurologically sound LAD. If deaf children can learn ASL, they should be able to learn English.

But why don't deaf children learn English? If they have an intact and functioning LAD, why don't they learn the language of their culture?

To answer that question it is necessary to examine the educational process used in most schools and classes for deaf children. Approximately 90 percent of all deaf children have hearing parents and do not possess a first language when they enter school. The most common characteristic of educational programs for deaf children is that English is taught. In fact, the teaching of English has become the primary concern of educators of the deaf. There is a great proliferation of systems and methods to teach English to deaf students. Even though many of the approaches are based on sound linguistic principles, the young deaf student is often required to memorize second-order symbol systems to analyze "blackboard" English. Such approaches are composed of "good" English, but of very little natural communication.

Brown and Bellugi have shown that young children learn language through natural communication. The teaching of the first language is unnecessary and detrimental. We must stop teaching English to our young, deaf students. First, second, third, fourth, fifth, and maybe even sixth grade students should not be taught English. They must be given more opportunities to use it in natural settings, and to see it used in natural settings.

If deaf children can learn ASL, then they can learn English, not from the blackboard but through manual communication. English can be signed to the deaf child. Through signed English the young deaf child can be exposed to a corpus of speech (signs) sufficient for him to produce a grammatical system of English.

If deaf children can learn English, why can't English be taught to them? More research and a theory of learning and education are pertinent here.

Vygotsky was a Russian psychologist. In his book, "Language and Thought", Vygotsky quotes Leo Tolstoy as follows :

> What a child needs is a chance to acquire new concepts and words from the general linguistic context. When he has heard or read an unknown word in an otherwise comprehensible sentence, and another time in another sentence, he begins to have a hazy idea of the new concept; sooner or later he will . . . feel the need to use that word—and once he has used it, the word and the concept are his . . . But to give the pupil new concepts deliberately . . . is, I am convinced, as impossible and futile as teaching a child to walk by the laws of equilibrium. (1934)

Vygotsky offers some clues as to why this may be true. First, he discusses words, because words involve both linguistic behavior and mental activity. Words are the result of verbal thought. What is the nature of a word?

Vygotsky says that one of the most important aspects of words is that they are generalizations that we make about the world. These generalizations, the meanings of the words, are not static. They are dynamic. They change and develop as people, and especially children, change and develop. Thus, a child learns a word, and the meaning of that word, according to his view of the world and of the object or concept that the word represents.

To teach the meaning of a word means to teach what the word means to the teacher and to the adults who use it. But a child who learns a word will not have the same mental generalization for that word that adults have. Thus, teaching meanings of words disturbs or impedes natural growth because too often, adult level generalizations are beyond the comprehension of the child.

Vygotsky also theorized about the mental processes involved in one and two word-sentences. When a child says "Daddy," that may be a complete sentence for the young child. A whole thought can be imbedded in the one word. The child means, perhaps, "Daddy is here," "Daddy is gone," or "Daddy is ready to eat," but because language is not yet come to cover thought in its entirety, it does not mean that the child does not have the thought. It only means that the child is not yet ready to express that thought in adult level grammar.

Thus, to teach, to require the child to read, write, sign or speak, or to actually conceptualize through adult language is premature. The hearing child is always exposed to "Oh, look. Daddy is home," types of sentences, but because thought and language have not yet meshed, the child does not decode or encode all of the sentence into separate linguistic units of "Oh—look—Daddy—is—home." Furthermore, parents do not attempt to teach language to their children. They do not ask their children to perform beyond the level of their linguistic abilities.

Vygotsky also theorized about the nature of learning to control the processes of mind and body. He states that being conscious of a function was the counterpart of being able to control that function.

Once a child becomes aware of language as a system, he can then be taught more about that system. Stern, a forerunner of Vygotsky, hypothesized that when children become aware that everything has a name, they are aware of the system of language. Vygotsky disagreed. Vygotsky believed that being aware that all things have a name does not indicate that children have discovered the symbolic function of language, but rather that children believe that the name of an object is an attribute of the object (Vygotsky, 1934).

When do children actually become aware of language as a system that they can control and use for their own benefit? Vygotsky didn't answer that question. Thus, we must look elsewhere.

Lenneberg (1971) states quite strongly that the child should not be introduced to any metalanguage before the sixth grade. Metalanguage is "the use of words and explanations about structure and grammar of language . . ." e.g., the terms verbs, sentences, articles. "It is folly to believe that we can tell him how to make a sentence without mistakes."

Why did Lenneberg say the sixth grade? The answer is to be found with Jean Piaget. Piaget believes that people of all cultures go through the same major stages in thought development. Piaget describes four major stages. The sensory-motor period from birth to two years of age. Next is the preoperational stage which is from roughly two to seven. The concrete operational stage is from seven to twelve. The last stage is from twelve to adult maturity, and is the stage of formal operations. It is characterized by the ability to make verbal propositions about the world, to test hypotheses and to make abstract generalizations without the aid of concrete objects (Sine, 1973). Most children are 12 years old when they are in the sixth grade. Thus, it seems that Lenneberg was saying, "Don't start teaching language until the child is mature enough to look at a system abstractly, to make verbal propositions and to use generalizations."

There is research which supports this view. Stephen Krashen (1975) has conducted research on the critical period for language acquisition. He concluded that students after puberty benefit from instruction while students before puberty do not. Krashen says adults like a systematized, instructional approach, whereas children do not. It seems that the formal operations stage imposes analysis and scrutiny on that which is being learned. Consequently, adults feel more comfortable with generalizations, rules, and principles to aid them. Because children do not think in that format, they are only confused and belabored with instruction and analysis of the language they are learning. The formal operations stage makes adults aware of the system in language, in work, in life itself. Therefore, English should not be taught to deaf children when they enter school but rather when they enter the stage of formal operations.

The process of teaching the first language contradicts both theory and research. Research shows that deaf children can learn language but that children are unable to deal with language intellectually. Thus rather than emphasize the teaching of communication, educators must emphasize learning concepts through communication. English must be the tool with which we teach concepts and, in turn, become the byproduct of that communication process.

The second concern of this paper deals with the role of written language in the educational process of deaf children.

Lenneberg thought that it was necessary to increase the deaf child's exposure to English through the printed word (1971). Does that theory stand up against research? Can the printed word function like the spoken word in the language acquisition process?

It is physically impossible for the deaf child to read from [illegible] blackboard or a piece of paper and maintain eye contact with the teacher. If Lenneberg's suggestion to use the printed word were carried out, the deaf child would be expected to learn English without immediate face to face communication. Research on the babbling of hearing infants and additional research on congenitally blind infants is relevant.

Daniel Stern has shown how crucial eye contact is before early speech skills are developed. The infant communicates much affect through visual contact. Babbling, cooing, kissing and other behaviors are reinforced by both the infant's and the mother's eyes. So important is eye contact in the mother-child dyad that in experimental situations mothers find it impossible to babble and baby-talk without the eye contact. Laughter, loss of speech rhythm and general embarrassment prevent the mother from communicating through baby talk when she is asked to drop eye contact with her infant (1975). Stern's research demonstrates clearly the need for eye contact between mother and child.

Fraiberg has done extensive work with congenitally blind infants. Prior to the development of speech, the blind baby is unable to communicate affect as most babies do, i.e., through visual contact. Fraiberg states:

> What we miss in the blind baby apart from eyes that see, is the vocabulary of signs and signals that provide the most elementary and vital sense of discourse long before words have meaning (1974, p. 217).

Fraiberg has discovered that blind babies circumvent their blindness by developing a hand signaling system that includes such concepts as waiting, searching, boredom, and fear. Mothers who learn to read those specific hand signals are able to feel "in touch" with their infant once again. More relevant to the education of deaf students is Fraiberg's concluding statement:

> Vocalizations to initiate contact appear later (in the second year) for our blind children. It is not easy to understand why. In families in which the rewards for vocalizations are very large, with much parental "talking to" the baby and the echoing of sounds, we are still struck by the absence of initiative in the baby. We can only guess that vision is a potent elicitor of vocalizations and that what appear as "greeting vocalizations" in sighted babies are stimulated by and reinforced by visual signs (e.g., the human face gestalt) (1974, p. 20).

At six months, a sighted child can communicate through visual contact the following feelings; longing or wanting, attention and interest, curiosity, doubt, coyness, and boredom (Fraiberg, 1974). The blind child cannot. It would seem, however, that the deaf child could communicate those feelings visually. By the end of the fifth year, the blind child has developed language comparable to the sighted (hearing) child. The deaf child, on the other hand, has not gone beyond his ability to communicate visually. Does our knowledge of blind babies give us any insight as to how we should shape the language experiences of the deaf child?

The auditory modality alones allows the blind child to learn English and the visual modality alone allows the deaf child to learn ASL. The printed word alone, however, does not allow the deaf child to learn English. Thus, because deaf children can learn language visually, it appears that the early use of the printed form of English negatively affects the acquisition of English.

Reading is an extension of oral-language communication. Students who have not acquired the language to communicate face to face, and who have not experienced the life, the pulse of communication through language, cannot appreciate communication through reading. Once the student has enjoyed the art of story telling from a listener's point of view, he can actively enjoy reading; once the student has learned how to create, build or change something through communication with another person, he can enjoy a "How to Do It" book. The student who appreciates a narration done by a friend or by a teacher will appreciate the story told in the printed word.

Thus, reading is not the problem. Communication through English is the problem. Hearing children are very adept at the use of English by the time they enter the first grade. It is only after they have acquired the human use of English that they start to read. Likewise, deaf children should be introduced to reading only after they have had a great deal of exposure to Manual English.

You will know when they are ready. When the deaf child begins to communicate in fairly good signed or spoken English, he is ready to begin reading. Then he should be sent to reading classes. This readiness may not come until the age of eight, nine, or even ten.

What should be done?

1. Schools must devise science, math and social curricula that do not depend on the written word for students who have not begun to read.
2. Story-telling must become an integral part of the educational program: fantasy, fairytales, mystery thrillers, etc. Story-telling should be linked to reading of adults and older children.
3. The child's expressive speech and sign syntax must be allowed to develop naturally, without correction, and it must be a vehicle for communication and learning. Above all, it must be cherished as more important than reading or articulation.
4. Speech skills must be taught. But it is especially important that beginning speech classes focus on words that reflect the child's interest and learned vocabulary.
5. After reading is introduced, text materials for the academic disiplines should be written on a level that corresponds to the class's receptive language abilities. Reading must remain a pleasure. A flood of reading materials must be made available to the students. Reading will be introduced before language instruction is begun.

In conclusion, it is important to note that linguistic age is more important than chronological age; that language use is more important than language study.

REFERENCES

Bellugi, U. & Kilma, E. The roots of language in the sign talk of the deaf. *Psychology Today.* 1972, *5*, 60-64.

Brown, R. *A First Language.* Cambridge: Harvard University, 1973.

Fraiberg, S. Blind infants and their mothers: An examination of the sign system. In M. Lewis & L. A. Rosenblum (Eds.), *The Effects of the Infant on its Caregivers.* New York: John Wiley and Sons, 1974.

Krashen, S. D. The critical period for language acquisition and its possible bases. *Proceedings of the New York Academy of Sciences.* (Conference on Developmental Psycholinguistics and Communication Disorders, 1975), in press.

Lenneberg, E. H. Prerequisites for language acquisition by the deaf. In T. J. O'Rourke (Ed.), *Psycholinguistics and Total Communication: The State of the Art.* Washington, D.C.: *American Annals of the Deaf*, 1972.

McNeill, D. The creation of language. In R. C. Oldfield & J. C. Marshall (Eds.), *Language.* Baltimore: Penguin Books, Inc., 1968.

Nelson, K., Carskaddon, G., & Bonvillian, J. Syntax acquisition: Impact of experimental variation in adult verbal interaction with the child. *Child Development*, 1973, *44*, 597-504.

Sine, N. *A child's eye view.* New York: Harper & Row, 1973.

Stern, D. N. Vocal and visual interaction between mother and infant. *Proceedings of the New York Academy of Sciences.* (Conference on Developmental Psycholinguistics, 1975), in press.

Vygotsky, L. S. (Thought and Language) (E. Haufman & G. Vakar, Trans.). Cambridge: M. I. T. Press, 1962. (Originally published, 1934.)

PRESCRIPTIVE USE OF THE CONTINENTAL PRESS SPIRIT MASTERS

Dorothy McCarr, Curriculum Consultant, Hearing Impaired,
Portland, Oreg.

The Continental Press Spirit Masters have been a popular, easy-to use material for many years. Countless teacher preparation hours have been saved by using these ready-made spirit masters. However, this material can also become an "easy way out" for teachers when used as "busy work" to give students something to *do*.

Students have varying needs in their academic life as well as their emotional and social life. In any class of students, regardless of how small in number, some students will have a need for more reinforcing or supplementary work than others. Teachers who try to meet these varying needs spend countless hours developing exercise sheets, etc. In some cases this is necessary when commercial materials do not fill this need.

Spirit masters, such as Continental Press, are great time savers but can be mis-used if all students are assigned these worksheets regardless of the need for such reinforcement. The author has found these materials to be an invaluable prescriptive tool for meeting the needs of individual students.

Fifty-nine content skill descriptors have been assigned to 134 sets of language arts spirit masters from the kindergarten through secondary levels. Each set of spirit masters has been assigned a number, and each spirit master in the set has been associated with a descriptor. Many spirit masters may be listed under more than one descriptor.

Each set of masters (24–30 masters) should placed in a three ring binder with the masters in acetate protector sheets (two masters back to back in one protector sheet). Label each binder with the title of the set and the number. Placing these on a shelf in a media center, faculty workroom or any other accessible place for teachers will enable easy location of specific materials.

The following is suggested for organizing each set of spirit masters for easy access as well as extended durability of the spirit masters.

Step 1.—Cut eaach master to 8″ x 11″ size (cut off ½ inch on one side or ¼ inch on each side). This will eliminate punching holes in the spirit master.

Step 2.—Indicate the assigned set number in the upper right hand corner of each spirit master. Some masters have half pages; therefore, indicate the number on both halves. (Be sure the carbon is in contact with the spirit master or the numbers will not appear on the carbon side of the spirit master).

Step 3.—Tear the carbon sheet off the spirit master if it is attached. The backing sheet should remain with the spirit master.

Step 4.—Tear off the perforated edge at the top of the spirit master.

Step 5.—Place spirit masters in plastic protector sheets punched for three-ring binders. Two spirit masters for a protector sheet back to back, so both may be seen.

Step 6.—Place protected spirit masters in a three-ring binder.

Step 7.—Punch three holes in the teacher's guide from each packet of spirit masters and place in the front of the appropriate binder.

It is not necessary to purchase all 134 sets of language arts spirit masters. One or many sets may be assembled and used with the prescriptive guide. Other sets may be added to the collection as desired. Organizing the materials in this manner will lengthen the life of the spirit masters, economize space in storing the materials; and provide teachers with an easy access to their use in a more helpful, prescriptive manner.

CONTINENTAL PRESS TITLES

KINDERGARTEN

Set number:	
1	Seeing Likeness and Differences, Part 1.
2	Seeing Likenesses and Differences, Part 2.
3	Seeing Likenesses and Differences, Part 3.
4	Visual Readiness Skills, Part 1.
5	Visual Readiness Skill, Part 2.
6	Rhyming A.
7	Rhyming B.
8	Rhyming C.
9	Thinking Skills A.
10	Thinking Skills B.
11	Thinking Skills C.
12	Beginning Sounds A.
13	Beginning Sounds B.
14	Beginning Sounds C.
15	Visual Discrimination A.
16	Visual Discrimination B.
17	Visual Discrimination C.
18	Visual Motor Skills, Part 1.
19	Visual Motor Skills, Part 2.
20	Independent Activities, Part 1.
21	Independent Activities, Part 2.
127	Rhyming, Part 1.
128	Rhyming Part 2.
129	Visual Discrimination, Part 1.
130	Visual Discrimination, Part 2.
131	Beginning Sounds, Part 1.
132	Beginning Sounds, Part 2.
133	Thinking Skills, Part 1.
134	Thinking Skills, Part 2.

PRE-PRIMER

22	Reading-Thinking Skills, Part 1.
23	Reading-Thinking Skills, Part 2.
24	Reading-To-Writing Skills.
25	Supplementary Reading-Art Activities.
26	We Get Ready To Read.

PRIME

27	Reading-Thinking Skills, Part 1.
28	Reading-Thinking Skills, Part 2.
29	Reading-To-Writing Skills.
30	We Get Ready To Read.
31	Supplementary Reading-Art Activities.

Set number—Continued	
	GRADE 1
32	Fun In Wordland A.
33	Fun in Wordland B.
34	Phonics and Word-Analysis Skills, Part 1.
35	Phonics and Word-Analysis Skills, Part 2
36	Reading-Thinking Skills, Part 1.
37	Reading-Thinking Skills, Part 2.
38	Crossword Puzzles for RTS.
39	Reading-Study Skills.
40	Long and Short Vowels.
41	Language Patterns and Usage, Part 1.
42	Language Patterns and Usage, Part 2.
43	We Learn To Read, Part 1.
44	We Learn To Read, Part 2.
45	Phonics Fun.
46	ABC Book.
	GRADE 2
47	Language Patterns and Usage, Part 1.
48	Language Patterns and Usage, Part 2.
49	Language Patterns and Usage, Part 3.
50	Exploring Good English, Part 1.
51	Exploring Good English, Part 2.
52	A Trip Through Worldland C.
53	A Trip Through Wordland D.
54	Phonics and Word-Analysis Skills, Part 1.
55	Phonics and Word-Analysis Skills, Part 2.
56	Variant Vowel Sounds.
57	Reading-Thinking Skills, Part 1.
58	Reading-Thinking Skills, Part 2.
59	Crossword Puzzles for RTS.
60	Reading-Study Skills.
126	Reading for Comprehension.
	GRADE 3
61	Adventures in Good English, Part 1.
62	Adventures in Good English, Part 2.
63	Language Patterns and Usage, Part 1.
64	Language Patterns and Usage, Part 2.
65	Language Patterns and Usage, Part 3.
66	Adventures in Wordland E.
67	Adventures in Wordland F.
68	Phonics and Word-Analysis Skills, Part 1.
69	Phonics and Word-Analysis Skills, Part 2.
70	Crossword Puzzles for RTS.
71	Reading-Thinking Skills, Part 1.
72	Reading-Thinking Skills, Part 2.
73	Reading-Study Skills.
125	Reading for Comprehension.
	GRADE 4
74	Language Patterns and Usage, Part 1.
75	Language Patterns and Usage, Part 2.
76	Language Patterns and Usage, Part 3.
77	Building Good English, Part 1.
78	Building Good English, Part 2.
79	Phonics and Word-Analysis Skills, Part 1.
80	Phonics and Word-Analysis Skills, Part 2.
81	A Flight Through Wordland G.
82	A Flight Through Wordland H.
83	Reading-Thinking Skills, Part 1.
84	Reading-Thinking Skills, Part 2.
85	Crossword Puzzles for RTS.
86	Reading for Comprehension.

Set number—Continued	
	GRADE 5
87	Using Good English, Part 1.
88	Using Good English, Part 2.
89	Language Patterns and Usage, Part 1.
90	Language Patterns and Usage, Part 2.
91	Language Patterns and Usage, Part 3.
92	Phonics and Word-Analysis Skills, Part 1.
93	Phonics and Word-Analysis Skills, Part 2.
94	Through Space To Wordland J.
95	Through Space To Wordland K.
96	Reading-Thinking Skills, Part 1.
97	Reading-Thinking Skills, Part 2.
98	Crossword Puzzles for RTS.
99	Reading for Comprehension.
	GRADE 6
100	Language Patterns and Usage, Part 1.
101	Language Patterns and Usage, Part 2.
102	Language Patterns and Usage, Part 3.
103	Mastering Good English, Part 1.
104	Mastering Good English, Part 2.
105	Reading-Thinking Skills, Part 1.
106	Reading-Thinking Skills, Part 2.
107	Crossword Puzzles for RTS.
124	Reading for Comprehension.
	ELEMENTARY UNGRADED
108	Crossword Puzzles—Phonics: Picture Clues.
109	Crossword Puzzles—Phonics: Consonants.
110	Crossword Puzzles—Phonics: Vowels I.
111	Crossword Puzzles—Phonics: Blends.
122	Crossword Puzzles—Phonics: Vowels II.
123	Crossword Puzzles—Phonics: Special Sounds
	GRADE 7
112	Junior High English, Part 1.
113	Junior High English, Part 2.
	GRADE 8
114	Junior High English, Part 1.
115	Junior High English, Part 2.
	GRADE 9
116	Junior High English, Part 1.
117	Junior High English, Part 2.
	SECONDARY UNGRADED
118	Mastering the Sentence.
119	Mastering Parts of Speech.
120	Mastering Good Usage.
121	Mastering Capitalization, Punctuation.

CONTENT SKILL DESCRIPTORS

Abbreviations—Initials.
Absurdities (What's Wrong).
Adjectives and Adverbs.
Alphabet.
  Alphabet (Writing).
  Alphabetizing.

- Analogies.
- Antonyms.
- Art Activities.
- Book Review, Outlining, Reporting.
- Calendar.
- Capitalization.
- Categories (Classification-Main Idea).
- Colors.
- Complete or Copy a Design or Missing Part (Visual Motor).
- Conjunctions.
- Consonants.
  - Initial.
  - Final.
  - Medial.
  - Blends and Digraphs.
  - Mixed (Initial, Final, Medial).
- Contractions—Apostrophe.
- Determiners.
- Dictionary.
- Encyclopedia.
- Eye-Hand Coordination.
- Figure Ground.
- Helpers (Workers).
- Holidays.
- Homonyms.
- Imagery, Metaphors, Similes.
- Inconsistencies, Irrelevancies, Wrong Words or Sentences.
- Index and Table of Contents.
- Inferring from Context (Drawing Conclusions).
- Interjections.
- Letter Writing.
- Library (Card Catalog-Reference Books).
- Likenesses and Differences (Visual Discrimination).
- Matching (One to One).
- Multiple Meanings.
- Negatives.
- Nouns.
  - Compound Words.
  - Identify.
  - Plurals.
  - Possessives.
  - Proper and Common.
- Paragraph Writing.
- Part-Whole Relationships.
- Parts of Speech (General Usage).
- Penmanship.
- Prefixes, Suffixes, Affixes.
- Prepositions.
- Pronouns.
- Punctuation.
- Questions.
- Reading for Comprehension.
- Riddles.
- Sentences.
  - Combining Sentences.
  - Diagraming.
  - Direct and Indirect Discourse.
  - Phrases and Clauses.
  - Scrambled Sentences.
  - Sentence Building.
  - Sentence Punctuation and Identification.
  - Sentence to Picture Matching.
  - Subject and Predicate.
  - Writing Original Sentences.

Sequencing.
Silent Letters.
Spelling Rules.
Syllables and Accent.
Synonyms.
Telephone Directory.
Titles.
Verbs.
  Identification.
  Irregular Verbs.
  Linking Verbs.
  Subject-Verb Agreement.
  Tenses.
  Transitive-Intransitive Verbs.
  Verb Forms & Usage.
Visual Memory.
Vocabulary.
  Finding Small Words in Large Words.
  Forming Words.
  Sentence to Picture Matching.
  Word to Definition.
  Word to Picture Matching.
Vowels.
  Single Vowels.
  Mixed.
  Rhyming Words.

AN EXAMPLE OF A DESCRIPTOR PAGE

Set number	Grade level	Page number
Abbreviations—Initials:		
48	2	1, 2, 26.
51	2	17, 18.
61	3	19, 51 52, 53, 54, 55, 59, 60.
64	3	10.
77	4	47, 48, 49, 56, 57, 58, 59.
87	5	58, 59, 60.
104	6	13, 14.
113	7	10.
121	(Secondary)	17, 18.
Absurdities:		
20	Kindergarten	24.
21	do	24.
134	do	17, 18.
Adjectives and adverbs:		
44	1	26, 27.
48	2	16, 17.
49	2	1, 9.
51	2	15, 22.

Continental Press Titles may be obtained for approximately $4.00 per set from the following offices:

THE CONTINENTAL PRESS, INC.

Elizabetown, Pa. 17022

127 Cain St. N.W.
Atlanta, GA. 30303

2085 E. Foothill Blvd.
Pasadena, CA 91109

P.O. Box 554
Elgin, Ill. 60120

2336 Farrington St.
Dallas, TX 75207

407 S. W. 11th St.
Portland, OR 97205

Miniature copies of the sets are also available upon request.

BIBLIOGRAPHY

McCarr, Dorothy. A Manual of Descriptors for the Continental Press Language Arts Spirit Masters. Dormac, Inc. Box 1622, Lake Oswego, OR 97034 c. 1975 84 pgs.

A CORRESPONDENCE AND DIRECT SERVICE PROGRAM FOR PARENTS OF DEAF-BLIND CHILDREN

Edgar L. Lowell, Ph. D., Director, John Tracy Clinic, Los Angeles, California

The Bureau of Education for the Handicapped has established goals for achieving full service to the handicapped with particular emphasis on the severely and multiplihandicapped. The 1964–65 Rubella epidemic increased the number of deaf-blind children from several hundred to more than 5,000. The country did not have enough facilities or trained personnel to meet the needs of this drastically increased population of severely multiplihandicapped children. To meet this crisis BEH attempted an innovative approach to the delivery of service which involved the establishment of regional deaf-blind centers. The concept behind the regional centers was that they could facilitate the sharing of limited manpower and other resources across jurisdictional boundaries and that the Regional Coordinator could facilitate the coordination of existing facilities and assist in the establishment of new ones where gaps were evident.

The regional centers concept has worked remarkably well considering the number of difficulties inherent in attempting to equitably allocate scarce resources in a crisis situation.

Although the number of children receiving direct diagnostic and educational help increased dramatically, there were still families, particularly those living in smaller communities, where educational services were difficult to arrange. Under the leadership of the National Coordinator for the Centers and Services for Deaf-Blind Children, Mr. Robert Dantona, and the Project Director of the Southwestern Region Deaf-Blind Center, Dr. William A. Blea, John Tracy Clinic was asked to develop a correspondence course similar to the one that the Clinic had been using with the families of deaf children with considerable success for over 30 years.

The Clinic gladly accepted this challenge. Upon examination of the deaf-blind population we felt that as a group they were not as homogeneous as the deaf children we had been dealing with. This does not mean that deaf children do not vary widely in their individual needs but only that the deaf-blind, particularly those with educational handicaps, seem much more divergent than the deaf population we were familiar with. We have also noted that different parents of deaf children enrolled in the correspondence course were able to cope with different amounts of educational material, depending on a variety of variables in the home, including whether the mother was employed outside of the home, the number of other children to be cared for, and the mother's motivation and interest in the correspondence course program.

On the basis of this information a Correspondence Learning Program for Parents of Preschool Deaf-Blind Children was planned. It consists of 12 basic lessons covering general information for the parent, instruction on developing communication skills and a discussion of parental attitudes. These lessons are sent out on a regular basis to the parents as soon as they have completed the previous lesson and returned the Parent Report Form to the Clinic. In addition, there are sets of specific educational materials, which we call Learning Steps, in seven different areas: gross motor, fine motor, eating skills, sleeping habits, dressing, toilet training, and personal hygiene habits. Each area has a different number of Learning Steps or installments. Since each child develops at a different rate in each area, different learning steps in different areas are sent out with each basic lesson. A check list which the family fills out as a part of the initial application and with subsequent installment reports provide us with a behavorial development profile of the child. The profile allows us to determine the learning steps and the areas that should be sent with successive basic lesson installments. The parent who takes a long time to complete an installment might receive fewer learning steps or might have fewer areas covered than a parent who was making more rapid progress and whose child's progress indicated a readiness for additional steps. The parents are also asked on the installment reports if there are areas of special concern in which they would wish to focus. When that occurs we concentrate the learning steps in those areas.

With each lesson a personal letter from the Clinic is always enclosed. This provides the staff of John Tracy Clinic a means of building a personal relationship with each family. We want parents to keep us informed of how and what their child accomplishes and to feel free to express their feelings of frustration, anger, love, happiness, whatever it may be. Our job at the Clinic is to listen, offer support and encouragement and to make suggestions that fit each person's needs.

The Correspondence Learning Program for Parents of Preschool Deaf-Blind Children has currently enrolled 458 children. While this is a select population, in that the majority of the children are still living at home rather than in institutions, it may be of interest to review some of the characteristics of this group. This information is based on the first 400 families to enroll. Fifty-four and five tenths percent of the group were males and 45.5 percent females. Forty-five and seven tenths percent were the result of Rubella and an additional 35.5 percent were reported as unknown causes. It is likely that a considerable portion of the 35.5 percent may also have been caused by Rubella. With respect to vision and hearing, 50.5 percent were reported to have partial vision and 21.5 percent were totally blind, with 12 percent reported as unknown. Twenty-four and seven tenths percent of the population are reported to have mild to moderate hearing loss. Forty-four and five tenths percent are reported to have a severe or profound hearing loss. Nineteen and two tenths percent had an undetermined loss at the time of admission to the correspondence course program. It is interesting to note that the undetermined hearing losses were higher than unknown visual capabilities. This suggests the greater difficulty in testing of hearing in young multiplihandicapped children. It is also interesting to note that 7.7 percent of the population was reported as having no hearing loss.

With respect to other problems, 14.5 percent of this population were reported to have heart murmurs, 11.2 percent were reported as patent ductus.

Seventy-five percent of the children were with their natural family, while 14.6 percent were in foster homes. While these figures are higher than we might find in the total population of deaf-blind children, they were not surprising for our sample as the correspondence course was designed for use by parents or parent surrogates. It is interesting to note that 237 children were under 6½ years of age and only 59 were born during the 1964–65 Rubella epidemic. This was somewhat surprising inasmuch as our original expectation was that the majority of children enrolled would be those from the 1964–65 Rubella epidemic who were low functioning. The fact that 237 of these children were under 6½ years of age suggests the possibility that the number of deaf-blind children born each year has not fallen back to the pre-1964–65 levels. If this is so, it may be necessary to change some of our future planning for providing service to the deaf-blind. Another possibility of course is that the attention focused on the deaf-blind as a result of the 1964–65 Rubella epidemic has resulted in more effective case finding and reporting procedures.

The average age at the time of enrollment was 68 months. This figure was skewed by the enrollment of one considerably older individual who is still functioning at a beginning level. The persons responsible for his care report that the course is of benefit to them.

Despite the success of the Correspondence Learning Program in helping to meet the Bureau's objective, a registry developed by the National Coordinator of Centers and Services for Deaf-Blind Children showed that there were still a significant number of deaf-blind children who were still not receiving any service. In a further attempt to meet the needs of these children and families, Project Spin Off was initiated as a one-year intensive nation-wide program to attempt to reduce the number of families receiving no service. It was also hoped that because of its national nature a program of this sort would create sufficient local interest so that it might stimulate and encourage local support for continuation of the service program as a "spin off" from the national project.

Thirty home-visitors nominated by the Regional Deaf-Blind Coordinators were enrolled in a workshop held at John Tracy Clinic in the late summer of 1974. The purpose of the workshop was to acquaint the home visitors with the Correspondence Learning Program for Parents of Preschool Deaf-Blind Children, to familiarize them with ways of gathering information about and utilizing local and regional resources to assist families of deaf-blind children, to provide emotional support for the parents and to generate positive public relations concerning the effort in an attempt to encourage continuation of the service effort. At the conclusion of the workshop 12 home visitors were employed by the regional centers and spent the 10-month period from September, 1974, through June, 1975, in a nationwide effort to attempt to reach those families who had previously been reported as not receiving service.

At the last reporting date the home visitors had made 867 home visits to 329 families.

The task of the home visitor is a complex one. In some cases the information available on unserved families was out of date because families had moved or the child had been enrolled in some type of service. This meant that the home visitors' role necessarily involved a considerable amount of case finding and identification.

The Spin Off Project also pinpointed some of the difficulties inherent in a nationwide effort of this type. A major problem was the great distances which home visitors had to travel. This problem was built into the project inasmuch as families in urban areas would be more likely to have some appropriate service available and rural families would not hence be appropriate candidates for the Spin Off program. We had predicted that the major problem the home visitors could encounter would be in continually dealing with the emotional problem of parents of multiplihandicapped children. While this was a problem, sheer fatigue from the travel involved was clearly the number one concern.

Another difficulty which was limited to only a few locations was that of what might be called territoriality. For a variety of reasons, which we would not attempt to judge, some states were less cooperative with the Regional Centers than others. Some states also required clearance with a designated state representative each time the home visitor called upon a family in that state.

In summary, it is our feeling that both the correspondence and direct service program sponsored by the Bureau for Education of the Handicapped has assisted materially in obtaining their goals of serving all deaf-blind children. It was our hope that a report of this program would be of interest to you, particularly the knowledge of the availability of the continued operation of the Correspondence Learning Program for Parents of Preschool Deaf-Blind Children, which is available at John Tracy Clinic under the sponsorship of the Southwestern Region Deaf-Blind Center, Dr. William A. Blea, Project Director.

The work on which this report is based is supported by: The Southwestern Region Deaf-Blind Center, Dr. William A. Blea, Project Director. Funded under the provisions of Public Law 91-230, Part C, Section 622, Bureau of Education for the Handicapped. Robert Dantona, National Coordinator, Centers and Services for Deaf-Blind Children.

A HABILITATION PROGRAM FOR CHILDREN WITH MODERATE, SEVERE AND PROFOUND LANGUAGE RETARDATION: A TEAM APPROACH

Sol Adler, Ph. D., Professor and Director, Pediatric Language Program, The University of Tennessee Hearing and Speech Center, Knoxville Tennessee.

INTRODUCTION

The "pediatric language program" at the University of Tennessee was funded in September of 1972, and became fully operational in January, 1973. Its patient population is composed primarily of children with moderate to severe and profound language retardation and its staff is composed of two speech and language clinicians, a movement educator, a special educator, a social worker, and the part-time services of the program director.

The following dynamics characterize the program and may differentiate it from other language habilitation team approach programs: (1) the evaluation protocol is relatively unusual in its stress upon patient acceptance of the examiner, the duration of the time-span involved in the testing program—one week, and the diversity and types of test tools used to evaluate the children; (2) the re-evaluation program appraises the relative success of the child habilitation program in conjunction with (a) any beneficial alterations that might have occurred in the patient's behavior as well as (b) the degree of improvement in the parent sophistication regarding the habilitative dynamics, and (c) in the mental health status of the family constellation; (3) the child habilitation program stresses the development of auditory-visual storage and processing skills through the utilization of linguistic "chunking" procedures, and varied intonations of these "chunks"—in essence, taking from the verbo-tonal and time-expansion literature selected treatment concepts; (4) the behavior management program stresses an interaction between behavior modification contingencies and psychopharmacological treatment; (5) the parent interaction program stresses intensive counseling and the amelioration of negative affect, as well as the more conventional educational aspects.

Two groups of children, with approximately 10 children per group, are seen in the mornings and another two groups are treated in the afternoons. Each child is seen for a minimum of two hours in a group activity and many of the children also are treated on an individual basis preceding, during or following the group activity. The children range in age from three to seven years. The degree of language retardation is determined by extrapolation of the American Association of Mental Deficiency's (1973) schema of communicative behavior by age, as follows:

LEVELS OF LANGUAGE RETARDATION: AAMD CLASSIFICATION, 1973

If a child's highest level of verbal functioning is as follows—	And his chronological age is[1]—	The child's language retardation level is therefore—
Imitates sounds, laughs or smiles back: no effective speech; responds to gestures and/or signs.	3 or above	Profound.
Uses 1 or 2 words (e.g., mama, ball) but predominantly vocalization	do	Severe.
May use 4 to 6 words; uses many gestures	do	Moderate.
May speak in 2 or 3 word sentences (e.g., daddy go work); name simple common objects.	do	Mild.
See No. 2 above	6 and above	Profound.
See No. 3 above	do	Severe.
See No. 4 above	do	Moderate.

[1] This age-range is dictated by the grant protocol supporting the program.

The etiologies of these language problems stem generally from (1) genetic problems such as Down's Syndrome, and causing a generalized depression of abilities and, (2) teratogenic factors, such as prenatal illness and infectious disease, causing specific dysfunctions, and (3) traumatic incidents, such as post-natal accidents or illnesses, also causing specific dysfunctions. Thus, some of the children possess an over-all retardation accompanied by specific language retardation, while others manifest a diversity of skills—normal and abnormal—but demonstrate a significant impairment of symbolization skills.

THE EVALUATION PROGRAM

Diagnostic-Therapy

In an effort to insure a fair and realistic evaluation of the child's potential, each child is allowed to interact with his peers and staff members for approximately one week before any attempt is made to administer a formal and/or informal test battery. During the following week or two a variety of tests are gradually presented to the child as a case history is elicited from the informant. In subsequent meetings staff members and other interested professionals have an opportunity to present their ideas and opinions into the diagnostic-recommendation process. Due to our friendly relationship with the local Birth Defects Evaluation Program, we are able to secure genetic analyses as indicated, and psychological evaluations routinely.

Initial evaluation

A variety of formal and informal tests may be utilized by the examiners. Following the initial evaluation, we discuss the results of the "staffing" with the parents. The following test battery describes the nature of these tests; some of which can be utilized only for those children with less severe problems.[1]

Test	*Areas tested*
Assessment of Children's Language Comprehension Test.	Receptive language, storage and processing.
Audiogram	Hearing acuity.
Auditory Discrimination Test (Boston)	Auditory discrimination involving sound and word contrasts.
or	
Auditory Discrimination Test (Templin)	Auditory discrimination involving sound and word contrasts.
or	
Auditory Discrimination Test (Wepman)	Auditory discrimination involving word contrasts only.
Auditory Blending Test (Roswell-Chall)	Auditory blending.
Behavior Checklist (our own)	Behavioral characteristics.
Behavioral Analyses (Wahler)	Observation of aberrant behaviors.
Birth-3 Scale (Bangs)	Expressive-receptive language, problem solving, social skills.
Columbia Mental Maturity Scale	Visual perception: eye-motor coordination, figure-ground, form constancy, position in space spatial relationships.
Digit Span Repetition (Adler)	Auditory memory.
Duplication of Geometric Forms (our own)	Visual-motor; perception of form.
Gross Motor Skills (University of Connecticut, the Mansfield Training Program).	Gross motor skills.
Growth Grid (Wetzel)	Measures growth patterns.
Houston Test of Language Development	Spatial orientation, body image, receptive-expressive language.
Illinois Test of Psycholinguistic Abilities	Auditory memory, association closure, and reception; visual reception, association closure, and memory; verbal and manual expression; grammatic closure; sound blending.
Incomplete Man Test (Gesell)	Visual-motor (eye-hand).
Michigan Picture Language Inventory	Receptive and expressive language.
Northwestern Syntax Screening Test	Receptive and expressive grammar.

---

[1] It should be immediately apparent that only selected tests are utilized during each evaluation; furthermore, much use is made of informal observations of children's linquistic and general behavior patterns.

Test	*Areas tested*
Oral Peripheral Examination (our own)	Structure and function of articulatory mechanism.
Peabody Picture Vocabulary Test	Receptive vocabulary.
Picture Story Language Test (Myklebust)	Expressive-written language.
Preschool Attainment Record (Doll, Experimental Version).	Attainment age: ambulation, manipulation, rapport, communication, responsibility, information, ideation, creativity.
Preschool Language Scale (Zimmerman, et al.).	Receptive and expressive language.
Receptive-Expressive Emergent Language Test (Bzoch-League).	Infant scale receptive and expressive language.
Schedule of Motor Development (Myklebust).	Developmental level of motor skills.
Screening Test of Auditory Perception (Kimmell & Wahl).	Auditory perception.
Sentence Repetition Test (our own)	Syntactic performance.
Test of Articulation (Templin-Darley)	Articulation performance.
Visual Motor Integration (Beery)	Visual motor.

Reevaluations

Each child is reevaluated routinely every six months, or sooner if indicated. Reevaluation reports are prepared which (1) compare his progress relative to his previous status re: speech and language performance, readiness skills, and behavior, and which (2) compare parental sophistication and mental health with previously ascertained levels. The previous recommendations and the progress manifested by the children and family in meeting these goals are then reevaluated, and new recommendations are fashioned.

THE HABILITATIVE PROGRAM

The dynamics of our treatment program involve five fundamental factors: (1) an interdisciplinary team approach to habilitation; (2) intensive parent-education and parent-counseling (these components of our program occur in the parental home as well as in the habilitation center); (3) parental involvement in the program, i.e., an active parent organization; (4) behavioral alterations in the children through a combination of approaches depending mainly on an interaction between operant conditioning strategies and psychopharmacological treatment, or each separately; (5) properly stored and processed input in the treatment program.

The Team Approach

The rationale for the team approach can be stated simply: two professional workers from tangentially related disciplines can teach and treat such children more effectively than can a single worker. Thus, our program includes two habilitation teams composed of workers from different disciplines. These professional peers must learn to coordinate their activities while respecting each other's expertise.

The primary goal of the habilitative workers is development of language skills as mentioned above. All workers contribute their unique talents to this goal: the speech and hearing clinicians generally contribute their expertise in more formal interactions with the children, as compared to the other professional workers, the special educator and the movement educator, who operate on a more informal level with the children.

Parent Education-Counseling

The second dynamic is more complex. Most parents of exceptional children can profit significantly from intensive education and counseling interactions. Yet parents may possess deeply felt negative feelings that affect their self-concept, and their relationships with their mate and/or children. Such covert detrimental relationships may trigger friction within the family with resultant unhealthy child-rearing and marital environments. Attenuation of these feelings and problems is obviously of primary importance if an habilitation program is to succeed in its goals.

In the home and clinic the social worker is mainly responsible for obviating the emotional problems relatively common to a family constellation in which a severely handicapped child is reared. Six areas of concern are of major interest to this worker: child behavior, parent-child relationship, parent-parent relationship, child-sibling relationship, maternal self-concept, and financial, physical and emotional concomitants of the home environment.

Of interest is the gradual emergence of guilt feelings and negative selfconcepts by some parents. Given the opportunity to ventilate their feelings, much cathartic behavior has been evidenced. Obviously, these feelings have to be handled carefully if the subsequent counseling interactions are to be healthy ones. To suggest that the emergence of these or other emotions is potentially dangerous and therefore that counseling should be devoid of such affect, is generally unsatisfactory and untenable insofar as successful counseling is concerned.[2]

With respect to the educational interaction, it has long been our philosophy that the amount of time some habilitationists traditionally allot to parental education is at best ineffective, and in some cases down-right damaging. To treat effectively a child's severe communication disorder requires that a very significant amount of time be alloted to the reprogramming of basic or foundational skills. Pragmatically, the only person capable of generating such amounts of time is the mother.

In many programs, however, it would not be unusual for interactions with the child's mother to be superficial; i.e., to tell the mother casually what has been done for her child during the clinical interaction, and to inform her rather simplistically regarding exercises she may perform in her home therapy with her child. But such relationships do not generally permit for the development of acceptable maternal skills, nor maternal insights into the necessity for the exercises.

In order to accomplish the goal of educating properly the parents of our clients, our professional teams work only four days with the children; on the fifth day—usually a Friday—they visit various parents in their homes, and on a need basis. These home visitations permit each habilitation team to program the mother in her natural environment; that is, the environment in which she is most comfortable and in which she is going to work with her child. Furthermore, the home environment is physically altered, if necessary and if possible, to allow for such effective interactions to occur between mother and child. For example, restructuring of a room—or part of a room—to make it more conducive to the therapy interaction. Subsequent visits are made to introduce lesson plans written for each child, attempting to remediate each child's unique deficits. Lessons are geared to the sophistication level of the parent and are demonstrated by the habilitation team members ensuring that minimal confusions and misapplications of therapy occur. Each member of the team is employed in drawing up the home therapy program, thus ensuring that the entire child and his problems in various areas will be considered. Each parent is encouraged to observe, as well as actively participate in her child's clinical therapy program, to ask questions of her habilitationist, and to participate in group meetings with other parents and with varied professional workers.

---

[2] Nevertheless, it is important to point out that in a few cases it has been decided that it is better for the present time at least, to try to allow certain feelings to remain repressed; that it is possible for us to do more harm than good by attempting to 'work with' these feelings.

The parent-staff association

To supplement the parental involvement activities noted above, we have helped in the creation of a parent-staff association (PSA) whose function is to:

(1) *Provide financial aid/aid in kind.*—Many projects have been undertaken thus far including fund raising activities (e.g., bake sale, rummage sale, and paper drive) and parent education programs involving different speakers whose presence is supported by the PSA. The University Panhellenic has donated money to the PSA which is being used to create a library for the parents' utilization. The PSA also has arranged for the donation of furniture (e.g., refrigerator and piano), and equipment (a large "Teddy" bear with lighted nose for use in "conditioning" program). In addition, the UPSA prepares clinical materials needed in the home educational programs as well as in the Clinic.

(2) *Helping new members.*—As new parents enter into the program they are frequently bewildered by the many activities surrounding them. A function of the PSA is to provide counsel and varied help to these parents until they adjust to the program.

(3) *Critical input.*—Parents generally know and understand well the varied needs of their children. At least this is the premise under which this program functions. To this end we solicit information and criticisms from the parents regarding the varied activities of the program. These comments are thoroughly discussed and evaluated in staff meetings.

Behavioral management

This refers to the frequent disturbances of activity states manifested by the children, and the need to change or modify these unacceptable behaviors. Effective therapeutic programming necessitates a child who is capable of "absorbing" the clinical input. Hyper- or hypo-active and/or distractible children are infrequently capable of storing and processing these inputs properly. Thus, effective methods must be devised to allow such children to better control their behaviors. This has been accomplished by pairing, when possible and desirable, operant conditioning contingencies, and psychopharmacological measures as recommended by the family pediatrician.

To eliminate the oppositional and negative behaviors as well as to control the activity states of the children, an individualized program of behavior modification has been constructed for a number of the children manifesting such aberrant behavior patterns. Utilizing the expertise of our consultant in child psychology, we have been able to implement effective techniques of reinforcement and extinction which are used daily in the clinic by the staff and the trained student clinicians. During the various parent-education interactions, the habilitation team has explained and instructed the parents in the proper techniques of behavior modification. It is unrealistic to expect consistent behavioral alterations to occur in the child's behavior pattern if modification training occurs in the clinic only—as is often the case in treatment programs. Stambaugh (1974) found in a research project completed recently in our program, that home scheduling, which is easily implemented by most parents, may cater to this need.

Furthermore, as indicated above, psychopharmacological treatment was advocated, and utilized successfully by some of the families whose children were particularly passive or hyperactive.[3] We believe that stimulant type drugs in particular, can be most effective with some children in obviating their behavioral problems, and that they deserve a trial with such medication. Nevertheless, an extreme degree of caution has been generated by the public's concern with drug abuse problems, to the degree that an overrestrictive policy is now in force and drug therapy is difficult to initiate. However, by collaborating with the family physicians we have been able to institute behavioral control programs which facilitate significantly the learning capabilities of some children.

Language treatment

The interdisciplinary team approach to the habilitative program allows for a unified "attack" upon those factors impeding the development of communicative skills catering to the child's different needs through a varied treatment program. To this end, the following specialists operate as team members to perform the following activities.

Sensory-motor skills involving the haptic, auditory, and visual sense modalities are taught to the children by the movement educator. This professional worker possesses a degree in physical education with a specialty in adaptive education for the mentally retarded. Her particular concerns involve teaching the children awareness of self in relation to the outside environment, and the attributes of movement: strength, flexibility, balance, coordination, agility, and endurance. The acquisition of such skills enable the child to develop a more meaningful relationship between his communication needs and abilities, and his environment. These sensory-motor functions according to Frostig and Maslow (1973), "are a necessary basis for the child's ability to discriminate sights and sounds and to focus attention. During this phase, the child learns to grasp spatial location and time sequences and sequential order through the acquisition of movement patterns . . . Such learning is a prerequisite for the acquisition of language because the development of language (oral, written, printed) is sequential." (p. 110)

---

[3] A recent thesis by R. Burns, completed at the Universtiy of Tennessee, Knoxville, 1972, suggests that many language retarded children can benefit from either dexedrine or ritalin—if proper dosage levels are prescribed and maintained.

Fine perceptual-motor programming is stressed by the special educator. In particular, the children are taught various eye-hand coordination skills involving visual space, figure-ground, form constancy, spatial relationships, and the decoding of sequential visual stimuli. By virtue of these activities, pre-reading and pre-writing skills are developed in most of the children, and basic reading abilities are taught to some of the older and higher functioning children.

The speech and language clinicians stress aural-oral development; the former through the utilization of treatment strategies designed to enhance auditory storage and processing skills and the latter with an informal psycholinguistic curriculum involving phonological, grammatical and lexical units. The former involves the use of time-expansion concepts (McCroskey and Thompson, 1973; LaBelle, 1973) employing rhythmic and intonational linguistic segments (Asp, 1974), with varied pause relationships. Furthermore, we try to stress significantly the last in a series of linguistic "chunks" presented to the child. This is done in view of the primacy—recency effects noted by McDade (1974) in which the first named command is usually retained (primacy effect) while the last command (recency effect) is usually forgotten.

In essence, speaking slowly, rhythmically, and in discrete linguistic clusters (i.e., a very few words at a time), seems to be of much help to children with storage and processing difficulties. With respect to the latter treatment strategy, we use the concepts well documented in the psycholinguistic literature to try to develop sequential language usage that is both intelligible and grammatically proper, at the same time the child learns the lexical equivalents of varied categories or classes of objects or things.

Conclusion: The need for such programs

Language skills are the touchstone upon which educational competence must ultimately rest. Most children will not develop their educational abilities and talents normally and/or properly if their means of communication—particularly oral communication—are impaired. This cliche has received wide acceptance during the past decade and language programming of exceptional children has been instituted on a significant scale and in a variety of habilitation centers. The previous discussion has described one such program.

In brief, the philosophy and goals of our program have been that (1) the family constellation must alleviate its conflicts and problems, if the mother is to be programmed successfully as a teacher-clinician-adjunct, and (2) that the child's negative behavioral pattern must be altered if the habilitation program is to be maximally helpful to him.

REFERENCES

C. Asp. "The Effectiveness of the Low Frequency Amplification and Filtered Speech Testing for Preschool Deaf Children", Final Report for BEH, HEW, Project Number 522113.

M. Frostig and P. Maslow. *Learning Problems in the Classroom*. New York: Grune and Stratton, 1973.

H. J. Grossman, (Ed.). *Manual on Terminology and Classification in Mental Retardation*. The AAMD publication, Special Publication Series No. 2, 1973.

J. L. LaBelle. Sentence comprehension in two age groups of children as related to pause position or the absence of pauses, *JSHR*, 16, 2. 1973.

R. McCroskey and N. W. Thompson. Comprehension of rate controlled speech by children with specific learning disabilities, *J. Learning Dis.*, Dec. 1973.

H. McDade. "An Evaluation of Methods for Testing Auditory Retention Abilities of Mentally Retarded Mongoloid Subjects", Unpublished Master's Thesis, University of Tennessee, Knoxville, 1974.

E. E. Stambaugh, Research Case Study in Scheduling A Child's Home Routine to Produce Desirable Behavior Change, Publication Pending, 1974.

UNDERACHIEVEMENT

Edna Adler, M.A., Office of Deafness and Communicative Disorders, Department of Health, Education, and Welfare, Washington, D.C.

Reducing underachievement in deaf people is a continuous and consuming challenge to agencies that serve them. Enabling legislation is crucial in making the work possible. This paper concerns vocational rehabilitation legislation that is helping agencies to extend more and better services to deaf people including the severely underachieving. In recent years, successive legislation for the handicapped has increased steadily and substantively opportunities for program expansion and innovation for all handicapped groups including deaf people. Since 1965 when Public Law 89-333, otherwise known as the Vocational Rehabilitation Act of 1965, authorized projects "to develop innovative efforts to meet the needs of severely disabled people" succeeding legislation has provided increasingly generous authorizations and appropriations for services and program development.

The Rehabilitation Act of 1973 and Amendments of 1974 which mandate that the most severely handicapped be served first are examples of legislation providing important new opportunities to reduce underachievement in deaf people. "Severe handicap" is described as a disability which requires multiple services over an extended period of time. Deafness is one of the disabilities classified as a severe handicap. In the well-recognized need of a majority of deaf individuals for "multiple services provided over an extended period of time" to achieve their potential, the legislation is uniquely responsive in its communication.

Five sections of the 1973 Act are of great pertinence to deaf people. They are new sources of assistance deaf people need in overcoming some, if not all, of the effects of long sustained underachievement and for removing barriers that make achievement more difficult for them.

Section 103. Scope of Vocational Rehabilitation Services

Item 11 in this section lists "telecommunications" as a case service and has important implications to ongoing efforts to reduce underachievement in deaf persons.

Provision through vocational rehabilitation of telephone-teletype communicative devices to eligible deaf persons is increasing the number employed or advanced to higher level jobs where in the past inability to use the telephone frequently represented a barrier to their employment or to advancement. Social values inherent to use of the telephone are fostering new independence in deaf persons, a needed prerequisite to personal fulfillment.

Section 304 Special Projects and Demonstrations

The section authorizes funding for the establishment of programs and facilities for providing vocational rehabilitation services to handicapped individuals, especially those with the most severe handicaps.

Direct reference is made in the section statement of deaf persons as handicapped individuals for whom services are to be provided. The referring language is "deaf individuals whose maximum vocational potential has not been reached. The intent of Section 304 is to make available to severely handicapped deaf people programs providing services they need which existing facilities are unable to offer.

The long neglect that has surrounded provision of services to deaf people who are unemployable or who cannot take advantage of postsecondary training opportunities due to serious deficiencies in their education makes Section 304 a turning point in the history of service to deaf people. Authorization of special projects and demonstrations for severely handicapped individuals provides, at long last, means to begin serving much more adequately the thousands of deaf persons who are in desperate need of rehabilitation services that will help them to become suitably employed and to assume better normal home and community responsibilities.

Three projects funded under the authorization were established in 1974. Approximately 150 young deaf adults whose severe educational underachievement indicates need for numerous compensatory services over a long period of time are now being served at the three programs. Many more programs must be mounted to serve the thousands of others in need of comprehensive rehabilitation services.

A random survey of 18 State Divisions of Vocational Rehabilitation made in 1972 revealed that 3,515 (60%) of the 5,879 deaf clients being served were unable to qualify for enrollment in postsecondary programs due to low educational achievement and poor communication skills. The vocational rehabilitation counselors surveyed indicated that 2,413 of their deaf clients were in critical need of comprehensive rehabilitation services.

The severe educational underachievement of too many deaf rehabilitation clients is illustrated in a report made at a research and demonstration project serving severely handicapped deaf people most of whom were in the age range of 18–25 years. In spite of an average I.Q. score of 91 on the Weschler Adult Intelligence Scale, Performance Scale, and an average of 11 years spent in prior education, the 106 subjects studied had average reading grade scores of 3.2 for word meaning and 2.8 for paragraph meaning. Moreover, subject behavior was described as inappropriate, inadequate, or impulsive. Diffidence to training and to future employment which characterized the group was seen to be an outgrowth of their poor communication skills and inadequate self-image brought on by repeated failures over the years.

At another project serving a similar population, it was found that half of the subjects had vision problems. How much of their educational underachievement was due to undetected vision impairments could only be guessed. Other health and mental health problems observed in the subjects if treated much earlier might have prevented underachievement.

Hopefully the new comprehensive rehabilitation training opportunities now becoming slowly available to severely underachieveing deaf youth and adults will pave the way to even more effective service delivery systems to this population.

Section 501 Employment of Handicapped Individuals

The section relates to the establishment within the Federal government of an interagency Committee on Handicapped Employees. It is the purpose of the committees to provide a focus for Federal and other employment of handicapped individuals on the adequacy of hiring, placement and advancement practices with respect to handicapped individuals and to insure that the special needs of such individuals are being met.

The purpose of Section 501 are extremely significant to deaf people whose underachievement in employment or in attaining higher level employment for which they have potential may be due to discrimination, to poor understanding of their capabilities by hiring personnel or to unmet training needs.

It is encouraging to note that the Civil Service Commission is already taking measures to insure that deaf people employed at Federal agencies have opportunity to train for higher level jobs. To date, two special training courses for deaf Federal employees have been sponsored by Civil Service Commission with gratifying results.

Further, a recent bill introduced in the Congress recommends the hiring of interpreters at Federal agencies where there are deaf employees. In these and other moves, the Federal government is taking positive action to reduce the underachievement of deaf Federal workers and is setting important examples to other employers in more and better utilization of the skills and talents deaf people abundantly have.

Section 503. Employment Under Federal Contracts

The section states that any contract in excess of $2,500 entered into by any Federal department or agency for the procurement of personal property and nonpersonal services for the United States shall contain a provision requiring that the contractor shall take affirmative action to employ and advance in employment qualified handicapped individuals.

Deaf persons along with other handicapped individuals will benefit in many ways from the mandate. In the requirement for affirmative action, many more employers will achieve a better understanding of the abilities of deaf people and their needs and problems. Opportunities for job training and for advancement in employment should increase as more qualified deaf individuals are hired under the affirmative action program.

A bill pending in the Congress to amend the 1964 Civil Rights Act to include handicapped people among others whose rights must be upheld will, when passed, strengthen substantially the affirmative action program.

Section 504. Nondiscrimination Under Federal Grants

The section specifies that no otherwise qualified handicapped individual in the United States shall solely by reason of his handicap be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance.

The historical exclusion of deaf people from participation in planning and developmental activities bearing directly on their own service needs which is just now lifting has severely limited their opportunities as policy makers. Possibly for no other group of handicapped people is Section 504 more pertinent than it is to deaf people. Their underinvolvement in program development has been commensurably slow.

The National Association of the Deaf Advisory Council on Deafness to the Commissioner of the Rehabilitation Services Administration established in February, 1975, is a shining example of active deaf community participation in program development affecting a major part of the deaf population. Dr. Andrew S. Adams, Commissioner, RSA, is to be commended on inviting the NAD to form a council of advisors to work with RSA in improving and expanding services to deaf people. Many more such advisory groups are needed to work with Federal, State and community programs involved in the delivery of services to deaf people.

Training deaf youth at secondary programs in consumerism will assure that more deaf adults are prepared for their critical role as advocates.

The 1974 Amendments to the Rehabilitation Act authorizes a White House Conference on Handicapped Individuals. The conference which is to be held in 1976 charges the participants who will include parents of deaf children, deaf people and those who work with them to give special consideration in their recommendations on problem solving to basic needs.

Needs areas quoted in Title III having great pertinence to deaf people are:

1. provisions of education, health, and diagnostic services for all children early in life so that handicapping conditions may be discovered and treated;
2. assurance that every individual with a handicap receives appropriately designed benefits of the educational system;
3. assurance that individuals with handicaps have available to them all special services and assistance which will enable them to live their lives as fully and independently as possible;
4. enabling individuals with handicaps to have access to useable communication services and devices at costs comparable to other members of the population;
5. assuring individuals with handicaps of equal opportunity with others to engage in gainful employment;
6. increasing research relating to all aspects of handicapping conditions, stressing the elimination of causes of handicapping conditions and the amelioration of the effects of such handicaps;
7. assuring review and evaluation of all government programs in areas affecting individuals with handicaps and a close examination of the public role in order to plan for the future;
8. resolving the problem of public awareness and attitudes restrict individuals with handicaps from participating in society to their fullest extent.

More and better opportunity for handicapped people to achieve is the end goal of each of the above objectives. Prevention of underachievement is roundly underscored. The unique problems surrounding the delivery of services to deaf people throughout their lives makes prevention of underachievement extremely difficult. Yet, prevention must be the long range goal, a constant reminder of the true potential deaf people have for achievement when their service needs are properly met.

BIBLIOGRAPHY

Adler, Edna P. (Ed.). Deafness Monograph Number 1. Journal of Rehabilitation of the Deaf. 1969.

Stewart, G. Larry and others. Guidelines for Rehabilitation Centers for Deaf Individuals. 1973

Stewart, G. Larry. Problems of Severely Handicapped Deaf. (reprint) Deafness Research and Training Center, New York University. 1972

THE ROLE OF GUIDANCE AND COUNSELING: IMPLICATIONS FOR SCHOOLS AND EDUCATIONAL PROGRAMS FOR THE DEAF

Allen E. Sussman, Ph. D., Department of Counseling, The Graduate School, Gallaudet College, Washington, D.C.

Guidance and counseling in education today is a big, booming, and bustling business. It has become a viable and integral part of education, with the school counselor as the pivotal professional. It is considered inconceivable for a school or educational program not to have guidance and counseling services.

As a testimony to this trend in modern education, college and university graduate training programs in guidance and counseling are proliferating in the United States. Another indication of the tremendous growth of this specialization within the helping professions is the American Personnel and Guidance Association (APGA), the professional organization of those engaged in guidance and counseling; it currently numbers 40,000 members. In addition to APGA's several divisions and professional journals, it is extremely active in legislative matters, and needless to say, packs an immense political wallop.

Pitted against this backdrop, deafness education presents a somewhat disappointing contrast. By and large, schools and educational programs are lagging behind general education on the guidance and counseling front. There are, however, reasons for optimism. Guidance and counseling has made some major inroads in deafness education. Some schools for the deaf have developed and expanded guidance and counseling services; others have begun to employ trained school counselors, and still others, while planning the budget, make provisions for new guidance and counseling positions. Another cause for optimism is the establishment in 1972 of Gallaudet College Graduate School's School Counselor of the Deaf Training Program, and the employment in 1974 of all of its first group of fifteen graduates by schools and educational programs for the deaf. This School Counselor of the Deaf Training Program, the only one of its kind at this date, currently numbers sixty-odd full-time, part-time and special students, the large majority of whom have had experience as teachers, dormitory supervisors, and related positions in deafness education. The full-time faculty consists of five members, four of whom hold doctorates in guidance and counseling or counseling psychology.

Another positive note is the recognition accorded to guidance and counseling by the CAID, as attested to by its being a major topic area at this convention.

SETTING THE RECORD STRAIGHT

It is a misconception that the school counselor works exclusively with troubled or disturbed students. It is also a misconception to indiscriminately equate counseling with personal problems. The modern school counselor, while still providing assistance for students in trouble, is primarily engaged in preventive guidance and counseling activities, and serves the majority of "normal" or relatively well-adjusted students, endeavoring to meet their present and future needs and concerns.

The school counselor is also a preventive mental health specialist in that, by dint of his training in the behavioral sciences, he should be able to screen for, and detect, incipient personal or emotional problems in students, thus immediately taking steps to nip the problem in the bud, either by providing direct counseling himself or by referral to a qualified specialist.

It is unfortunate that psychology is preoccupied with psychopathology, or disorders of human behavior, and their treatment. A psychologist's knowledge about psychopathology is enormous, but knowledge of "normal" or healthy behavior is even less. The school counselor, however, is more concerned with mental hygiene, and the fostering of healthy adjustments. Of course, the school counselor has to be knowledgeable as regards behavior pathology, but he is not obsessively preoccupied with it. Rather, he is very attentive to the behaviors by which people lead satisfying lives (Blocher, 1966). As such, he is concerned with the overall development of the student as a person, with his adjustment to the school, to his family, his peers, and his eventual adjustment as an adult. In short, counseling may be thought of as a psychological process to help the student to live more effectively and happily.

THE SCHOOL COUNSELOR'S ROLE AND FUNCTIONS

Another misconception is that the school counselor spends practically all of his working hours in individual personal counseling with students. In fact, even in individual counseling, he is not restricted to personal counseling. For the present, a sketch of the counselor's role and functions, based on guidelines given by the American School Counselors Association (Kroth, 1974), should serve to illustrate the scope of his functions in the school. In addition to individual personal counseling, the school counselor does the following:

1. *Planning and development of the guidance program.*—The counselor plays a central role in planning and developing the services and procedures to be used in the overall guidance program. He also interprets those services to students, teachers, school administrators, and parents.

2. *Student appraisal.*—The counselor plays a major role in the accumulation, organization and interpretation of appraisal data gathered from students. This includes coordination of standardized test scores, academic records, teacher reports, psychological tests, and the like.

3. *Educational and occupational planning.*—The counselor assumes responsibility for some part in the provision of educational and occupational information and educational/vocational counseling services. This includes the interpretation to the students the results of vocational aptitude and interest tests.

4. *Referral work.*—The counselor is the principal person on the school staff who makes and coordinates referrals both to other specialists in pupil personnel services and to public and private agencies in the community.

5. *Parent assistance.*—The counselor holds conferences with parents and acts as a resource person on the growth and development of their children. When needed, parent counseling is provided.

6. *Consultant.*—As a major function, the counselor serves as consultant to teachers, administrators, and other school staff on individual pupils. In the case of the residential school for the deaf, the counselor provides a consulting function to dormitory supervisors.

7. *Group guidance or group counseling.*—The counselor organizes and conducts guidance or counseling groups for students, with topics ranging from personal and social to educational and vocational concerns.

DEAFNESS: GUIDANCE AND COUNSELING

The aforementioned pretty much encapsulates the role of functions of the counselor in the educational setting. And, because of deafness and its concomitants, the case for a well developed and effective guidance and counseling program is indeed compelling. Still adhering to the precepts of preventive mental health, the following are areas of special emphasis.

Guidance and counseling revolving around deafness

Amazingly, this aspect in the lives of deaf people is usually not dealt with. Most deaf individuals do not understand their own deafness; they are generally ignorant of the various etiologies and types of hearing loss, including their own. Moreover, they do not know how to read the audiogram, or know—exactly in terms of decibels—the amount of their own hearing loss. Since a major goal of counseling is increased self-awareness, understanding of deafness, especially one's own, is of paramount importance.

It is important, also, for deaf youngsters to express their feelings about being deaf; deafness is best dealt with when it is verbalized and out in the open—and it can be effectively done through group counseling, where each deaf youngster would have the empathy and support of his peers. We note the pervasive negative self concepts in deaf people due, apparently, to their negative attitudes regarding deafness (Sussman, 1972). This, of course, has profound implications for their academic, social and vocational performance. Through guidance and counseling, deaf youngsters can come to learn that, in spite of its irreversibility, consequent speech difficulties and language problems, profound deafness is not necessarily a stultifying, paralyzing or defeating influence, and that they can, with effective compensatory techniques, succeed in many spheres of life.

Hearing aid counseling

As is well known, far too many deaf youngsters hold negative attitudes toward wearing the hearing aid, thus causing untold misery for themselves, their teachers and parents. Many older students, upon leaving school, discard their hearing aids, their benefits notwithstanding. The hearing aid, with its cumbersomeness, renders the invisible disability of deafness visible, thus understandably stigmatizing its wearer as a person with a physical disability. This has especial pertinence for the deaf adolescent, for whom the stigmatizing hearing aid is a superimposition on his body-image concerns inherent in this development phase.

For these reasons it is important, through counseling, for the deaf youngster to express his feelings about his hearing aid and the various problems associated with it, and to cope with those feelings. Guidance and counseling along this dimension would, in addition to giving him personalized information about the hearing aid, enable him to internalize its value, to accept it as something as natural as wearing glasses, to wear it at all times, and to be responsible for its maintenance.

Educational and vocational planning

Underemployment among the deaf population inexorably sticks out like a sore thumb, a major cause of which is the lack of occupational information and educational/vocational counseling services during the school years. Moreover, we have to bear in mind that deaf adolescents and young adults have to compete with their hearing counterparts who have had career education and superior educational/vocational counseling services. Not having auditory channels to occupational information outside the school adds to the precariousness of deaf youngster's pre-vocational development. Finally, we cannot expect Vocational Rehabilitation to do in a few interviewing sessions what the school is naturally endowed to do over several years in the way of career education. Gross vocational immaturity could be alleviated through career education, starting at the elementary level, and then coupled with educational/vocational counseling in later years. When we talk about vocational development, we also mean the development of a positive, healthy and effective pre-vocational attitude and personality, a realistic perception of the world of work and its requirements, and an understanding of importance of education, training and specific effort in overcoming occupational prejudices and discrimination against deafness.

Parent counseling

Parent counseling is a major area of counseling in the field of deafness—at least it should be. At the risk of redundancy, parental attitudes toward, and adjustment to, deafness and their deaf child play a tremendous role in his life-long psychosocial adjustment. Parents often need professional assistance in coping with their own feelings about having a deaf child. In parent counseling, the counselor often deals with their differential reactions to deafness in the child, their feelings of guilt, feelings of helplessness, anxieties, depressions, and their doubts about their ability to raise a deaf child. With some parents, maladaptive defense mechanisms such as rationalization, denial, rejection, and overprotectiveness have to be dealt with. Almost invariably, the counselor has to contend with parents' confusion stemming from divergent and sometimes conflicting opinions of experts such as the otologist, the audiologist, the hearing and speech specialist, and the educator. Parents are also often bewildered by the different educational programs for deaf children, the different communication philosophies in education, the sign language, sign language training, all of which require therapeutic information-giving skills on the part of the counselor. It is not an exaggeration that pathology often lies with parents rather than the deaf child, thus the need for intensive and extensive training in parent counseling.

Ideally, parent counseling should start immediately following diagnosis and confirmation of deafness in the infant. If not possible, parent counseling, then, should start upon the deaf child's entry to school. It is indeed a sad commentary that parents of deaf children are a relatively neglected group; they need as much, if not more than, help as their deaf children. They need more than the PTA; they need personalized parent guidance and counseling.

Counseling for multihandicapped deaf children

Educators need not be reminded of the configurational changes in deafness education with the ever-burgeoning number of deaf children with additional disabilities. This stark fact alone argues for counseling and other therapeutic services over and above what is required for children with the single disability of deafness, a rationale being the high incidence of emotional and behavior problems among handicapped deaf children (Jensema and Trybus, 1975). In short, an educational program for those children is decidedly not complete without supportive guidance and counseling services, staffed by specialists trained to work with multihandicapped deaf children. Here, the role of the school counselor emerges in bold relief, as he would be expected to work even more closely with teachers, administrators, dormitory supervisors, other pupil personnel staff and parents.

Further, we take cognizance that an increasing number of schools are adopting the behavior modification approach in the education of multihandicapped deaf children. The school counselor, if he is familiar with behavior modification and behavioral counseling techniques, would be in an advantageous position to render assistance and support.

Counseling with mainstreamed deaf children

"Success stories" notwithstanding, it is now acknowledged that many deaf children integrated or mainstreamed into regular public schools do encounter myriad academic, psychological and social adjustment problems. This is not to be construed as a polemic against mainstreaming; rather, it is an assertion, based on clinical experience (Williams and Sussman, 1971), that it is blatant professional irresponsibility to mainstream deaf children into what may be a more threatening psychosocial environment in the hearing school, without provision of supportive guidance and counseling services staffed by specialists in deafness.

The regular school counselor, due to no fault of his own, is simply not trained or equipped to communicate with, or to deal with the needs of deaf students. We have the itinerant teacher of the deaf, who perambulates from one school to the other, providing deaf students with continuing speech training and tutorial assistance. Why not an itinerant counselor of the deaf? Some school districts are successfully employing such a counseling specialist for mainstreamed deaf students. It should be mentioned at this juncture that Gallaudet College Counselor of the Deaf Training Program's interns have proved their value and mettle not only in direct counseling with mainstreamed deaf students in the Metropolitan Washington, D.C. Area, but also in counseling with their parents, in serving as resource persons and consultants to the regular public school teachers, administrators and guidance staff.

If there is ever a student population in acute need of specialized guidance and counseling services, it is those deaf children mainstreamed into regular public schools.

Sex education and counseling

It is an open secret that deaf adolescents and young adults are not as well informed about sex and human sexuality. The information aspect alone is most crucial; research has repeatedly demonstrated the relationship between sex information and psychosexual adjustment. Clinical experience with deaf adults reveals that much of their sexual problems are directly and indirectly related to lack of appropriate sex information, especially during their developing years.

Under the rubric of sex education and guidance, we have, among others, sexual development, dating, marriage, sexual intercourse, procreation, childbirth, the family, venereal disease and its prevention and treatment. We have, also, adolescents with boy-girl relationship problems, and assorted concerns or problems revolving around sexual development, all of which could be dealt with in individual or group counseling sessions.

Significantly, changing values and the so-called sexual freedom has brought on a new kind of anxiety which affect deaf as well as hearing individuals. They suffer conflict; they worry, for instance, about *not* having had sexual intercourse. There also are current issues that have to be dealt with on the reality level, such as birth control, use of contraceptives, abortion, unwed mothers and shot-gun marriages. Homosexuality, too, should be a topic covered in the whole scheme of things. If young hearing people have access to such information, young deaf people should not be denied the same.

"Women's Liberation" or its other appellations is relevant here. This writer is dismayed by many deaf females' general naivete and ignorance of issues involved with "Women's Liberation," and what it can mean to them in terms of sexual equality and equal employment opportunity. The relative success of a "consciousness raising" counseling group with female Gallaudet College undergraduates accentuates this area of need.

Although sex education and counseling is to be encouraged in schools and educational programs for the deaf, they should not be left in the hands of teachers, physical education instructors, or even school counselors, who are not qualified as sex educators and sex counselors. This is a delicate enterprise best conducted by sex educators and sex counselors who have had training in the phases of sexual development, and methods and techniques of sex education and counseling. This competency aspect is underscored by the mushrooming literature on the subject, the establishment and growth of professional organizations of sex educators and counselors, and professional standards and certification procedures.

If this writer may be brash to add, school teachers, administrators, and particularly dormitory staff should have a bit of sex education and guidance themselves. All too often we hear of school staff striking fear in deaf youngsters on the "sinfulness" of normal heterosexual activities such as kissing; that V.D. is the result of God's punishment for premarital sexual intercourse, and filling the deaf adolescent's impressionable mind with the "awfulness" and abnormality of masturbation, with its dire folklore consequences such as insanity or castration, whereas it is a normal psychosexual development. Of course, there must be rules for appropriate sexual behavior; such behavior can be carried to extremes. But the baleful and unwarranted admonitions of the school staff can also be carried to extremes, to the detriment of the deaf youngster's psychosexual development.

Drug education and counseling

Drug Scene, U.S.A.: As a countermeasure, public school systems have mounted active drug education and counseling programs. This writer's three hearing children commenced their drug education while they were in the elementary school in New York City. Presently, as teenagers in Maryland, they continue to be exposed to the various drug education programs in the junior high and high school. They hear and question experts on drugs and former addicts. They are quite conversant with the various types of drugs legit and illicit, hard and soft, in various forms, including alcohol, and their effects on the individual. They have also learned to deal with peer pressure. For this, this writer is grateful. At least, his children know what it is all about.

It is, however, beyond this writer's comprehension that, by and large, drug education and counseling have yet to be formalized and systematized in deafness education. Deaf youngsters are just as vulnerable to drugs as their hearing counterparts. We have deaf youngsters who use and abuse drugs; we have deaf adults who are drug addicts and alcoholics. We would be taking a pollyanna attitude if we claim drug use and abuse is practically nonexistant in schools and educational programs for the deaf.

Perhaps this general lack of attention to drug education and counseling in deafness education or its token or haphazard approach here is a reflection of its general lack of formalized and systematized guidance and counseling service programs, of which drug education and counseling is a crucial component. A one-shot lecture session by a teacher who had read about drugs in the Readers Digest won't do. It has to be an on-going process, geared to the age and maturational levels of deaf boys and girls, conducted by counselors or experts familiar with drugs and the drug scene. Services in this regard should include confidential individual and group counseling with deaf youngsters who already are experimenting with, or using or abusing, or hooked on, drugs. There is always the deaf adolescent, perhaps due to peer pressure and his need for acceptance, who is undecided about taking pot. Indeed, is is extremely difficult and impractical to keep a constant surveillance of deaf youngsters within and without the school, and we cannot always sniff them out. At least we can provide them with dynamic, on-going drug education and counseling programs whereby deaf youngsters can become aware of the different types of mind-bending and mind-altering drugs, and most important, of their effects on the individual.

A final word

The heart of any guidance and counseling program in the educational setting is the school counselor. The demands of this profession dictate a master's degree level of training. As a specialist, the school counselor of the deaf requires specialized training, over and above that which is normally required for the school counselor of normally hearing children. The practice of "promoting" or moving a teacher into a school counselor position without proper training and credentials in guidance and counseling no longer will do, and it goes against the grain of rigorous professional standards.

True, the school counselor of the deaf is a young profession, but it should not be spared from certification procedures. As with the C.E.D., and its certification of teachers of the deaf, we should see, in the very near future, the certification of school counselors of the deaf. Deaf children deserve no less.

REFERENCES

1. Blocher, D., *Developmental Counseling*, New York: Ronald Press Company, 1966.

2. Jensema, C., and Trybus, R., *Reported Emotional/Behavior Problems Among Hearing Impaired Children in Special Educational Programs: United States, 1972–1973*, Washington, D.C.: Gallaudet College, Office of Demographic Studies, 1975.

3. Kroth, J., *Counseling Psychology and Guidance*, Springfield, Ill.: Charles C. Thomas, Publisher, 1973.

4. Sussman, A., *An Investigation Into the Relationship Between the Self Concepts of Deaf Adults and Their Perceived Attitudes Toward Deafness* (Unpublished Doctoral Dissertation), New York University, 1973.

5. Williams, B., and Sussman, A. Social and Psychological Problems of Deaf People. In Sussman, A., and Stewart, L. (Eds.), *Counseling With Deaf People*, New York University, 1971.

A COOPERATIVE SYSTEM FOR CHILD DEVELOPMENT: PROBLEMS CHANGED INTO OPPORTUNITIES

I. Principles

Mark N. Ozer, M.D., Associate Professor, Child Health and Development, George Washington University

II. The Learning of an Adaptive Language

Rudolph Gawlik, Counselor, Kendall Demonstration Elementary School, Gallaudet College

III. The Parent-Teacher Conference as an Application

Marlene McAleer, Counselor, Kendall Demonstration Elementary School, Gallaudet College

I. PRINCIPLES

The concept of assessment of children with various learning and behavior problems has been reconsidered in a more problem solving fashion. Assessment is viewed as an opportunity to go through a planning process, drawing upon the resources available. The primary resources in solving the child's problem are those people most directly and frequently interacting—the classroom teacher, parent, and child—in ascending order of importance. The specialist, whether counselor or other staff person, serves as a consultant to these primary people. One aspect of the role of the consultant is to facilitate sharing of ideas between the parent and teacher, between the child and parent, and between the child and teacher. The content of such communication is individualized to the particular problems that are present. However, the format for such communication is a standardized one. Another aspect of the role of the consultant is to maintain a problem solving structure to this interaction. Such a structure, once learned, can be used by these primary participants, independent of the consultant.

The format for such interaction between the parent, teacher, and child is a planning process. They are asked to define their areas of "satisfaction" and "dissatisfaction". In their priority area, they are asked to describe what the child had done successfully this past week as a baseline. An exploration then goes on of various methods of presentation and feedback that they have found useful. Short-term goals are set which are then evaluated at a follow-up. This planning process is carried out at each interaction so that the format becomes clearer and is used independently for planning for other children and other problems. Each of the primary participants is viewed as a resource in this collaborative effort.

The involvement of the hearing impaired child in the solution of his problems requires special techniques. Particular attention has been given to the development of greater awareness on the part of the child as to what works in making the environment more responsive in terms of methods of presentation. The child can then contribute to his/her own learning and the solution of his/her problems.

One objective for the child, therefore, is the increasing use of what has been called an "adaptive communication vocabulary". It is felt that the problems of the deaf child relate to his/her relative inability to affect the environment in which teaching may go on. An initial set of coping statements—such as "slow down." "sign with me." etc.—are presented to the child by which he may affect the modes of presentation, as well as the character of feedback he is provided.

The child experiences the value of these statements and receives recognition, not only for his accomplishment, but also the contribution made to bringing such an accomplishment about. In this fashion, the child learns, not only the task at hand, but a more general way by which learning may go on. A communication system has been set up which the adult and child consider themselves to be interacting with each other, so as to bring about mutual adaptation.

II. THE LEARNING OF AN ADAPTIVE LANGUAGE

Learning is an interactive process in which the teacher and the child actively participate. "Problems" that interfere with this interactive process can be changed into "opportunities," if the child is seen as a resource for solving the "problem" and for learning how to interact more successfully. The teacher and the child share responsibility and power; they become cooperators.

Observation indicates that the deaf child is often only a "receiver," trying to understand, decipher, and make sense out of the environment, but with little or no way to affect the input or tell others what needs to be changed. This situation leads to feelings of powerlessness and frustration, which strongly influence the child's concept of himself and what he can and cannot do. The student feels he has no control over his environment; no way to change it, so that he might adapt to it more easily. Such feelings ultimately find their expression in belligerent behavior, in withdrawal, or in the many varieties of behaviors by which students avoid something to which they cannot adjust.

Language, words and phrases that will give a child a "handle" on the environment, can be called "adaptive language". A child needs words and phrases that will not only communicate his needs, but also affect some change in the situation and give him some control over it.

First of all, children need to be able to control some physical aspects of the communication. Phrases—like "tell me again, please" or "say it slow, please"—give the child the necessary control over the rate of input. The child also needs to be able to ask for a change in modality or for a model to copy.

The Kendall School Counseling Program has developed a short dialogue to teach students and teachers (and parents) the principles of adaptive language. The dialogue includes some of the possible strategies for a learning interaction and serves as a model.

The dialogue is as follows:

STUDENT. I don't understand.
TEACHER. Okay. How can I help you?
STUDENT. Again, please. Again, slow. Write, please. Show me. Sign with me.
TEACHER. Thank you for telling me.
TEACHER. Good!

The dialogue is introduced to students and teachers in a game. The object of the game is to give the sign for a fingerspelled word, and success is insured by the use of all five strategies. The game is expanded to include typical classroom tasks. Students and teachers are asked to generalize their skills to all interactions and create new strategy phrases to meet their needs.

The "Adaptive Dialogue" offers students, teachers, and parents a systematic way of learning how to share responsibility and power in their interaction. "Problems" are changed into "opportunities" for growth.

III. THE PARENT-TEACHER CONFERENCE AS AN APPLICATION

In many schools, parent-teacher meetings have existed for the purpose of giving parents information regarding their child's academic and behavior progress. In these meetings, information is given one way from teachers to parents, and the meeting usually does not follow a systematic format that permits follow-up. It is not a sharing process. These meetings often make parents feel unequal, incompetent, and uncomfortable. They feel threatened and begin to feel they are at the meeting to hear the negative about their child. These feelings of threat and inferiority can be changed by using a systematic format for parent-teacher meetings that is designed to alleviate and eliminate these feelings. The system makes the parents feel competent to deal with their child. It is designed to make parents feel comfortable, competent, and equal.

The systematic format that is used includes the following:

Question 1. What are your concerns for your child's progress?

Answer. The objective in Question 1 is to specify an area of concern this past week. Evaluation can go on of such specificity by use of a scale. It may be expected that the consultant will take an active role in exploring with the parent and teacher in their areas of concern, so as to help them clarify what it is.

Question 2. In the area of your concern, what has he/she been able to accomplish successfully?

Answer. The objective in Question 2 is to move the thinking of the parent and teacher toward a more positive view of the child. What has the child done successfully this past week in that area of concern. Evaluation can go on of the number of positive statements made. This is a crucial contribution of the consultant in keeping, to consider what might be built upon. The child with problems is reconsidered in terms of opportunities. What does he already accomplish in this area? Might he receive recognition for what was accomplished?

Question 3. What do you think made it possible for the child to be successful?

Answer. The objective here is to explore and list at least several things that worked in relation to the accomplishments considered in Question 2. The consultant helps the primary participants clarify their thinking. It becomes increasingly clear in discussion that each of the primary participants have contributions to make. A repertoire of adaptive strategies are built up that the consultant can offer to subsequent clients.

Question 4. What would you like the child to be able to do by next month?

Answer. Goals are set with the degree of specificity and the number of goals as one measure of this question. The process of defining concerns—what the child can do and exploring what works—can now be combined into a plan for the future. Part of this plan would include the time for follow-up.

This systematic format gets parents and teachers to look for opportunities for solving problems that are their concern, and makes these opportunities into experiences that will enhance child development. This system increases parent and teacher satisfaction with a child, and gets them responding to the child with satisfaction.

ADVERBIAL CLAUSES: A DEVELOPMENTAL METHOD

James E. McCarr, Assistant Director, Teacher Training for the Hearing Impaired, Lewis and Clark College, Portland, Oreg.

The procedures that are described below were developed in the classroom out of necessity since no materials could be found that helped to develop, not just explain, adverbial clauses. They proved to be successful with students in the intermediate grades who had the ability to write basic kernel sentences.

The format of the presentation includes "Steps" which outline procedures that lead the student to skills which are described by "Sub-Objectives" which in turn gradually lead to the "Unit Objective" which describes the final accumulation skills that the student will demonstrate.

Unit objective.—Given a prompt (i.e, pictures, dramatization, experience, etc.), the student will write sentences containing adverbial clauses beginning with: before, after, while, as, or when.

Sub-Objective 1.—A. Given pairs of kernel sentences depicting sequential events, the student will combine them into one sentence containing an adverbial clause beginning with "after".

B. Given sentences containing adverbial clauses beginning with "after" the student will write the two underlying kernel sentences and label them "A" (what happened first) and "B" (what happened second).

Step A.—1. Give the direction: Join together. Use "after".

Then write a pair of kernel sentences.
Example: Tom brushed his teeth.
Tom went to bed.

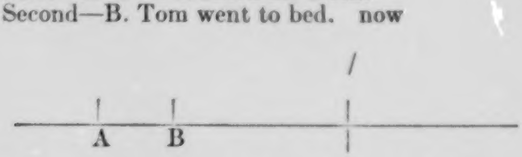
2. If the student is unable to do it, lead him through these procedures:

a. Draw a time line.

Example:

b. Have the student identify the sentence that happened first as "A" and the one that happened second as "B" and draw them into the time line.

Example: First—A. Tom brushed his teeth.
Second—B. Tom went to bed.



c. Putting a blank before each clause, write the sentences consecutively and above each clause label it appropriately "A" and "B". Begin with sentence "B".

B A
Example: —— Tom went to bed —— Tom brushed his teeth.

d. Because you want to use "after", show with an arrow that the "A" over the second clause clues the use of "after" which begin with the letter, "a". Eliminate the blank before clause B.

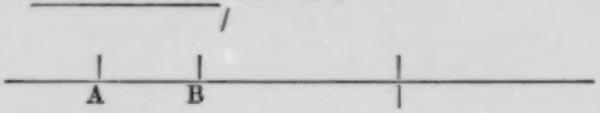
B A
Example: —— Tom went to bed *after* Tom brushed his teeth.

e. Change all words in the second clause that are repeated from the first clause to their corresponding pronouns.

he
Example: Tom went to bed after ~~Tom~~ brushed his teeth.

f. Ask the question, "When did Tom go to bed?", and demonstrate on the time line.

Example: Tom went to bed after "A".



Step B.—1. Give the direction: Join together. Use "after"; then write a series (one pair at a time) of paired kernel sentences depicting sequential events.

Example: Ann finished dinner.
Ann ate dessert.
Ann ate dessert after she finished dinner.

2. If there is any difficulty, lead the student through the procedures of *Step A*, part 2.

NOTE.—When the student's responses become consistently correct, demonstrate that the sentence may begin with the adverbial clause. Then, however, the adverbial clause is separated from the remainder of the sentence by a comma.

Example: After she finished dinner, Ann ate dessert.
or
After Ann finished dinner, she ate dessert.

Step C.—1. Draw a time line.

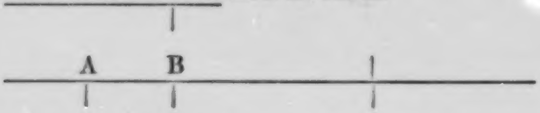
Example:

Write a series (one at a time) of sentences containing adverbial clauses beginning with "after". Have the student write the two kernel sentences and label them "A" (what happened first) and "B" (what happened second)

Example: Bob raked the lawn after he cut it.
A—Bob cut the lawn.
B—Bob raked the lawn.

2. If there is a difficulty, ask the question—"When did Bob cut the lawn?"; and demonstrate on the time line.

Example: Bob raked the lawn after he cut it.



Evaluation of Sub-Objective 1.—A. Give the student a list of paired sentences (the amount is left to discretion of the teacher) depicting sequential events. Direct the students to combine each pair of sentences into one sentence containing an adverbial clause beginning with "after".

Example: Join together. Use: "after".
1. Jerry caught the fish.
Jerry cooked the fish.

2. Ann's shoes were wet.
   Ann walked through the puddles.
3. The woman tasted the soup.
   The woman made the soup.

B. Give the student a list of sentences (The amount is left to the discretion of the teacher) containing adverbial clauses beginning with "after". Direct the students to write the two underlying kernel sentences and label them "A" and "B".

Example: Write the kernel sentences. Label one sentence "A", first. Label the other sentence "B", second.

1. After the boys ate supper, they watched T.V.
2. The men rested after they worked.
3. You may play outside after the rain stops.

Sub-Objective 2.—Given pairs of kernel sentences depicting sequential events, the student will combine them into one sentence containing an adverbial clause beginning with "before" or "after".

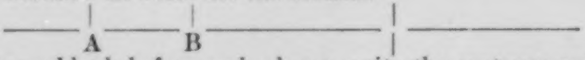
Step A.—1. Give the direction: Join together. Use "before". Then write a pair of kernel sentences.

Example: Mike ate the banana.
Mike peeled the banana.

2. If the student is unable to do it, lead him through these procedures:

a. Draw a time line, and have the student identify the sentence that happened first and label it "A" on the time line and identify the sentence that happened second and label it "B" on the time line.

Example: First—A. Mike peeled the banana.
Second—B. Mike ate the banana.



b. Putting a blank before each clause, write the sentence consecutively and above each clause label it appropriately "A" and "B". Begin with sentence "A".

Example: —— Mike peeled the banana —— Mike ate the banana.

c. Because you want to use "before", show with an arrow that the "B" over the second clause clues the use of "*b*efore" which begins with the letter "b". Eliminate the blank before clause A. B

A

Example: —— Mike peeled the banana *before* Mike ate the banana.

d. Change all words in the second clause that are repeated from the first to their corresponding pronouns.

Example: Mike peeled the banana before he ate it.

e. Ask the question, "When did Mike eat the banana?", and demonstrate on the time line.

Example: Mike peeled the banana before he ate it.

Step B.—1. Give the direction: Join together. Use "before"; then write a series (one pair at a time) of kernel sentences depicting sequential events.

Example: Pam went outside.
Pam put on her coat.

2. If there is any difficulty, lead the student through the procedures of *Step A*, part 2.

NOTE.—When the student's responses become consistently correct, demonstrate that the sentence may begin with the adverbial clause. Then, however, the adverbial clause is separated from the remainder of the sentence by a comma.

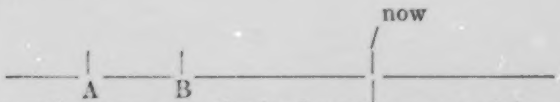
Example: Before she went outside, Pam put on her coat.
Before Pam went outside, she put on her coat.

3. Write a series of paired kernel sentences depicting sequential events, and direct the student to join each pair of sentences together using "before" and then using "after".

Example: Join together. Use "before".
The rat died.
The rat ate the poison.
The rat ate the poison before it died.
The rat died after it ate the poison.

Step C.—Draw a time line.

Example:

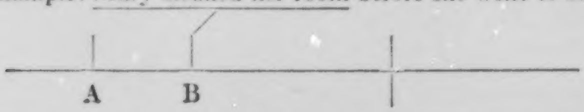


Write a series (one at a time) of sentences containing adverbial clauses beginning with "after" or "before". Have the student write the two kernel sentences and label them "A" (what happened first) and "B" (what happened second).

Example: Write the kernel sentences. Label: A—What happened first. B—What happened second.
Mary cleaned her room before she went to school.
A—Mary cleaned her room.
B—Mary went to school.
They ate the ice cream after they made it.
A—They made the ice cream.
B—They ate the ice cream.

2. If there is any difficulty, ask the question, "When did Mary clean her room?", and demonstrate on the time line.

Example: Mary cleaned her room before she went to school.

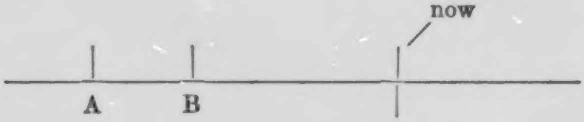


Step D.—1. Write a series of sentences containing adverbial clauses beginning with "before" or "after" but delete the "before" and "after". Direct the students to supply "after" or "before" to complete the sentence.

Example: Complete the sentence. Use: "before" or "after".
a. Sue cried —— she fell down.
b. Ron ate 100 cookies —— he got sick.
c. —— Pam can play, she must finish her homework.
d. —— Bill's mother gave him some candy, he thanked her.

2. If the student has difficulty, lead him through these procedures:
a. Draw a time line.

Example:



b. Direct the student to determine what happened first and label it "A".

A
Example: Sue cried —— she fell down.

c. Then have the student determine what happened second and label it "B".

B A
Example: Sue cried —— she fell down.

d. Ask, "Is the blank before the "A" or the "B" clause?" If it is before the "A" clause, draw an arrow from "A" to the blank and ask which word begins with an "A"—before or after. Then insert the proper word.

B A
Example: Sue cried *after* she fell down.

Step E.—1. Write a series of paired kernel sentences depicting sequential events and direct the student to combine them using "before" and "after".

Example: Join together. Use "after".
Mary saw the snake. Mary screamed.

2. If the student has difficulty, lead him through the procedures in *Sub-Objective 1, Step A*, part 2.

3. Example, Join together. Use "before".
They turned off the light. They left.

4. If the student has difficulty, lead him through the procedures in *Sub-Objective 2, Step A*, part 2.

Evaluation of Sub-Objective 2.—Give the student two lists of paired sentences (the amount is left to the discretion of the teacher) depicting sequential events and direct the students to combine each pair of sentences from one list by using "after" and each pair of sentences from the other list using "before".

Example: Join together. Use "after".
1. They went home.
They said, "Good night."
2. Jim was happy.
Jim won the prize.
Join together. Use "before".
1. Joan can buy a new coat.
Joan must earn some money.
2. The puppy was very sick.
The puppy died.

Sub-Objective 3.—Given pairs of kernel sentences depicting sequential or concurrent events, the student will combine them into one sentence containing an adverbial clause beginning with: before, after, while, or as.

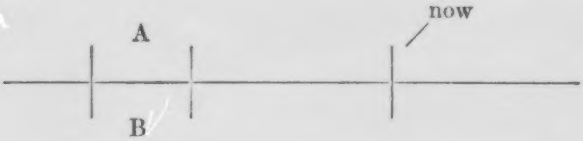
Step A.—Write two kernel sentences in the past progressive tense, and direct the student to indicate the sentences on the time line.

Example: Put the sentences on the time line.

Bill was cutting the grass.
Sue was planting some flowers.

Step B.—If the student is unable to do Step A, demonstrate that both sentences happen at the same time and therefore can be joined together by "while".

Example: A. Bill was cutting the grass.



B. Sue was planting some flowers.
Sue was planting some flowers while Bill was cutting the grass.
or
Bill was cutting the grass while Sue was planting some flowers.

NOTE.—Because both sentences happen simultaneously either one can become the adverbial clause. "A" and "B" are used merely as identifiers and not to indicate a sequence of events.

Step C.—Write a series of paired kernel sentences and direct the student to join the pairs together using "after" or "while".

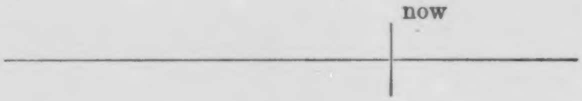
Example: Join together. Use "after" or "while".
a. Joe ate the apples
Joe washed the apples.
b. Mike was playing baseball.
Ann was studying.

If the student has any difficulty with sentences similar to those in 1,a, lead the student through the procedures in *Sub-Objective 1, Step A*, part 2.

2. If the student has any difficulty with sentences similar to those in 1, b, lead him through these procedures:

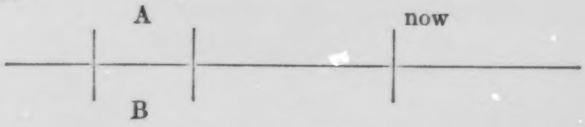
a. Draw a time line.

Example:



b. Ask the student which sentence happened first—"Mike was playing baseball." or "Ann was studying."; and demonstrate on the time line.

Example:



c. Explain that when both sentences happen at the same time, one must use "while" to join them together.

Example: Mike was playing baseball while Ann was studying.
or
Ann was studying while Mike was playing baseball.

NOTE.—When the student's responses become consistently correct, demonstrate that sentences may begin with "while". Then, however, the adverbial clause is separated from the remainder of the sentence by a comma.

Example: While Mike was playing baseball, Ann was studying.

Step D.—1. Write a series of paired kernel sentences and direct the student to join the pairs together using "before" or "as".

Example: Join together. Use "before" or "as".
a. Mary was leaving.
Tom was coming.
b. Joe found $5.00.
Joe did not have any money.

2. If the student has any difficulty with sentences similar to those in 1, a, lead the student through the procedures in *Sub-Objective 3, Step C*, part 3. Explain that "as" may be used instead of "while".

3. If the student has any difficulty with sentences similar to those in 1, b, lead the student through the procedures in *Sub-Objective 2, Step A*, part 2.

Step E.—1. Write a series of sentences containing adverbial clauses beginning with "before", "after", "as", or "while", but delete the adverbials. Direct the student to complete the sentences by supplying the word, "before", "after", "as", or "while".

Example:
a. ——the baby was sleeping, Mrs. Jones was making dinner.
b. Everyone went home——they finished dinner.
c. ——Mike fell in the mud, his clothes were clean.
d. He was dreaming——he was sleeping.

2. If the student has any difficulty, lead him through these procedures:

a. Draw a time line and ask the student if both sentences are happening at the same time. If the answer is yes, then use "while" or "as".

b. If the sentences happened at different times, direct the student to determine what happened first and label it "A". Then have the the student label the sentence that happened second as "B".

c. Ask the student, "Is the blank before the "A" or the "B" clause?" If it is before the "A" clause, draw an arrow from "A" to the blank and ask which word begins with an "a"—before or after. Then insert the proper word.

B ________A
/

Example: Everyone went home *after* they finished dinner.

If the blank is before the "B" clause, do the same thing.

________B A
/

Example: *Before* Mike fell in the mud, his clothes were clean.

Step F.—Write a series (one at a time) of paired kernel sentences depicting sequential or concurrent events and direct the student to combine them using "before" or "after", "while" or "as".

Example: Join together. Use "after" or "as".
1. The boy was climbing the tree.
The boy's pants were getting dirty.
2. Sue became sick.
Sue ate a quart of ice cream.
Join together. Use "before" or "while".
3. Mary washed her hands.
Mary ate her lunch.
4. Don was walking to school.
Don was thinking about a new bike.

If the student has any difficulty, lead him through the appropriate procedures.

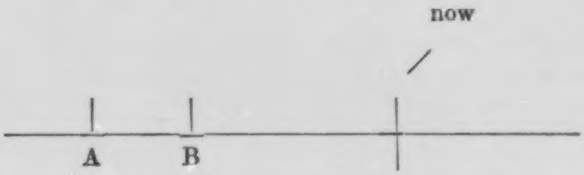
Evaluation of Sub-Objective 3.—Give the student a list of paired sentences (the amount is left to the teacher's discretion) depicting sequential or concurrent events and direct the student to combine each pair of sentences using "before", "after", "while", or "as" at least once each.

Example: Join together. Use "After" (one time)
"Before" (one time)
"While" (one time)
"As" (one time)
1. The bird flew away.
John opened the bird's cage.
2. It was raining.
They were walking home.
3. The man was whistling.
The man was working.
4. Tom practiced for an hour.
Tom could do the new trick.

Sub-Objective 4.—Given pairs of kernel sentences depicting sequential or concurrent events, the student will combine them into one sentence containing an adverbial clause beginning with: before, after, while, as, or when.

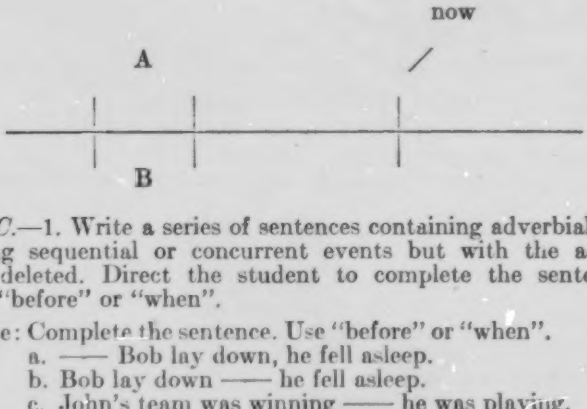
Step A.—Because the student is already quite familiar with adverbial clauses beginning with "after", merely explain and demonstrate that the word, "when", can be used in place of "after".

Example: Joe caught the ball. (B)
Mike threw the ball. (A)
Joe caught the ball *after* Mike threw it.
Joe caught the ball *when* Mike threw it.



Step B.—Because the student is already familiar with adverbial clauses beginning with "while" or "as", merely explain and demonstrate that "when" can be substituted for "while" or "as".

Example: A. It was raining.
B. They were walking home.
It was raining as they were walking home.
while
or
It was raining when they were walking home.



Step C.—1. Write a series of sentences containing adverbial clauses depicting sequential or concurrent events but with the adverbial clause deleted. Direct the student to complete the sentence by adding "before" or "when".

Example: Complete the sentence. Use "before" or "when".
a. —— Bob lay down, he fell asleep.
b. Bob lay down —— he fell asleep.
c. John's team was winning —— he was playing.

Step D.—1. Write a series of paired kernel sentences depicting sequential or concurrent events and direct the student to combine them by using "before", "after", "while", "as" and "when" at least once each.

Example: Join together. Use: after (one time)
before (one time)
while (one time)
as (one time)
when (one time)

Step E.—1. Write a series of sentences containing adverbial clauses beginning with "before", "after", "while", "as", or "when". Direct the students to write the underlying kernel sentences and to label them "A" (what happened first), "B" (what happened second), or "same" (what happened concurrently).

Example: Write the kernel sentences. Label: A—What Happened
First.
B—What Happened
Second.
Same—Happened at the
Same Time

a. Before we went on vacation, we fixed the car.
b. Joe liked the spinach after he tried it.
c. While the men were fishing, the women were resting.
d. Everyone was quiet as the old man told his story.
e. When he climbed the hill, Bob could see for miles.
f. The puppy was sleeping when we were driving.

Desired responses:

a. A—We fixed tne car.
B—We went on vacation.
b. A—Joe tried the spinach.
B—Joe liked the spinach.
c. same The men were fishing.
The women were resting.
d. same Everyone was quiet
The old man told his story.
e. A—Bob climbed the hill.
B—Bob could see for miles.
f. same The puppy was sleeping.
We were driving.

2. If the student has any difficulty, use the time line and follow the appropriate procedures.

Note.—When the student can perform the tasks described in Steps D and E with 85 to 90 percent accuracy, then proceed to Sub-Objective 5.

Sub-Objective 5.—Given a prompt, the student will write sentences containing adverbial clauses beginning with: before, after, while, as or when.

Step A.—1. Present the student with a set of prompts. These prompts can be a series of pictures, experiences that you have shared with the student, or dramatizations which have been staged in class. Then direct the student to write sentences containing adverbial clauses beginning with: before, after, while, as or when.

Note.—a. Sub-Objective 5 has two purposes. First, it helps the student to generalize the sentence skills he has learned in a structured format to the production of these sentences in a more spontaneous setting. Second, it gives him practice for the Unit Evaluation.

b. It is important for the teacher to go slowly when working on Sub-Objective 5. It may be advisable to require the student to use only "before" and "after" in his first effort and then gradually introduce the rest of the adverbial clauses.

2. If the student has difficulty with any particular construction, lead him through the appropriate procedures.

Unit evaluation.—Present the student with a set of prompts (i.e, a series of pictures, dramatizations, experiences, or whatever will motivate sentence production.) These prompts should be different from those used in Sub-Objective 5 so that the memory factor will be lessened as much as possible (i.e, if you used pictures in Sub-Objective 5, you could still use pictures as prompts; but select different ones.). Direct the student to write sentences (the amount is left to the discretion of the teacher) containing adverbial clauses beginning with "before", "after", "while", "as", or "when".

Example: Write sentences about the pictures.
Use: before (# times)
after (# times)
while (# times)
as (# times)
when (at least once as "after")
(at least once as "while")

It is hoped that these procedures will be of help to teachers who are looking for a method to teach adverbial clauses to hearing impaired students. Your students' performance should prove the worth of the method.

AN INTRODUCTION TO THE NON-SPEECH LANGUAGE INITIATION PROGRAM

Mary E. Shackelford, Colin Anderson Center, St. Marys, W. Va.

Joseph K. Carrier, Jr., University of Kansas, Parsons, Kans.

Carolyn G. Critcher, Colin Anderson Center, St. Marys, W. Va.

Needs for the development of new language programs

The acquisition of language skills may be one of the most important aspects of a person's life. Through various forms of language skills, a person learns to communicate basic wants and needs. Thus, he learns to manipulate his environment. He expands these skills further to interact with his environment. If a person does not learn language skills, severe problems may arise—he becomes limited in his ability to make contributions to his own care and limited in his ability to interact with society.

Although there are effective programs existing today for the client who has obtained verbal language communication, a large population of language defective clients has needs that are not being met. This population consists of the people who are non-verbal or who have little effective communication.

Rationale

Usually speech pathologists begin teaching language by teaching spoken responses. Then they require the child to apply an order or sequence to these responses so that the phonological, morphological, symantic and syntactic elements of language convey the information needed for communication. When language therapy is approached this way, the child is required (1) to learn and produce a complex motor topography for speech, (2) to demonstrate a complex system or set of rules for language and (3) to combine both, simultaneously. This appears to be an almost impossible task for many multiply handicapped and severely retarded children to learn.

However, an analytical look at components of communicative behavior reveals language as the set of rules connecting a symbol system to its referrent. The referrent is the meaning one tries to convey; the symbol system is the overt behavior through which one demonstrates language skills. It becomes apparent that language is not an overt behavior, per se, but language skills may be demonstrated only by responses (Carrier, 1973).

The overt responses or symbol systems through which one demonstrates language skills are usually the spoken word, written word and manual signs. All these responses require complex motor topographies. However, one can use a symbol set which does not require a complex response to teach linguistic rules. One type of simple alternative response mode is selecting a geometric form and placing it on a tray. Therefore, by separating the process of teaching a complex symbol system (such as speech, writing or signing) and teaching language rules, we simplify the task. This increases the possibility of success.

The non-speech language initiation program.

Work on the Non-Speech Language Initiation Program (Non-SLIP) began as an attempt to replicate, with severely retarded children, the language training procedures that Premack (1970) used to teach language functions to chimpanzees (Carrier, 1974). The initial study (Schmidt, Carrier, and Parsons, 1971) indicated that a non-speech response mode with humans would require more than mere replication of Premack's training procedures and sequences. The children needed some language response classes with which they would be able to communicate effectively in standard English grammar (Carrier and Peak, in press).

It was at this time that Carrier at Parsons State Hospital and Training Center in Parsons, Kansas, systematically applied the disciplines of linguistics, decision logic and programming to the development of such a program. From it emerged an elaborate program with finely graded steps and a definite set of procedures for teaching language through a non-speech response mode. The result of the data available on 50 subjects who have gone through at least some part of the training sequence indicates that the population trained on this program can and do learn at least some part of a communication system using a geometric form response mode.

The programs are step by step procedures for teaching linguistic rules without requiring speech from the child. The child learns to select appropraite geometric forms, which function as words, and to arrange those forms on a response tray as if they are writing sentences. The program format is as follows:

(1) The child first learns matching and discrimination skills prerequisite to the program (Color Matching Program, Number Matching Program, Symbol Matching Program, and Picture Matching Program).

(2) The child then learns to sequence seven symbols according to color and number cues in a rote fashion (Rote Sequencing Program).

(3) Next the child learns to select appropriate geometric symbols as "word" functions in response to specific picture stimuli (Labeling Program).

(4) The child last learns to combine the sequencing and selecting activities resulting in a sentence structure (Constituent Selection Programs—subject noun, verb, object of the preposition and preposition).

During training procedures, another response mode (speech, signs, writing, etc.) is paired with the geometric symbol response mode. Many children begin imitating the clinician's speech model and eventually give the verbal response without having to imitate the clinician. Some children who do not imitate speech learn to use manual signs or language boards on which the symbol and written words are printed. Suggested procedures for teaching these responses are reported in the Non-SLIP Manuscript (Carrier and Peak, in press) to be included in the program kit.

The Non-SLIP is not intended to teach any child all he needs to know about communication. These programs are intended as a catalyst for the language learning process. But, properly implemented, when the child has completed the program, he can move into one of the currently available programs designed for less severely handicapped children (Carrier and Peak, in press).

Implications for research with the deaf

Non-SLIP has many possibilities available for research. More research with special population groups such as the deaf or severely auditorily impaired is quite feasible.

The deaf or severely auditorily impaired population learns to use language and to speak or sign only after extensive training. It is hypothesized that the Non-SLIP would be a logical and effective language intervention program for the young deaf child. The emphasis on visual stimuli and the lack of dependence on verbal instructions fit their needs ideally. Other areas to examine with this population are (1) the program's effect on the acquisition of specific syntactic structures with the deaf population and (2) the program's effect on the acquisition of speech or manual signs with this population.

It appears that Non-SLIP may have important implications for the development of language programs for special population groups (deaf, autistic, aphasic, etc.) as well as the mentally retarded nonverbal child.

BIBLIOGRAPHY

Bosley, S., & Carrier, J. Establishing linguistic behavior in severely retarded children. Paper presented at Region V, AAMD Convention, Wichita, KS, October, 1973.

Carrier, J. K., Jr., Application of functional analysis and a non-speech response mode to teaching language. Parsons Research Center Report No. 7. Parsons, KS, February, 1973.

———. Application of functional analysis and a non-speech response mode to teaching language. In L. W. McReynolds (Ed.), Developing systematic procedures for training children's language. ASHA Monograph No. 18, 1974.

———. Non-speech noun usage training with severely and profoundly retarded children. *Journal of Speech and Hearing Research*, 1974., 17, 510-517.

Carrier, J. K., Jr., LaCroix, Z., & Critcher, C. Use of non-speech training to facilitate learning of spoken communication skills. Paper presented at Spring Conference of Oklahoma Speech & Hearing Association, April, 1973.

Carrier, J. K., Jr., & Peak, T. J. *Non-Speech Language Initiation Program*. Lawrence, KS: H & H Enterprises, in press.

Critcher, C., Carrier, J. K., Jr., & LaCroix, Z. Speech and language using a nonspeech response mode. Paper presented at the annual meeting of the American Speech and Hearing Association, October, 1973.

Hollis, J. H., & Carrier, J. K., Jr. Communication deficiencies from chimp to child. *Educational Considerations*, 1974, 1, 6–11.

Peak, T. J., & Carrier, J. K., Jr. Establishing prelinguistic responses in severely retarded children. Paper presented at Region V American Association on Mental Deficiency Convention, Wichita, KS, October, 1973.

Premack, D. Language in chimpanzee? *Science*, 1971, 172, 808–822.

———. A functional analysis of language. *Journal of Experimental Analysis of Behavior*, 1970, 14, 107–125.

Premack, A. J. & Premack, D. Teaching language to an ape. *Scientific American*, 1972, 277, 92–99.

Schmidt, M. J., Carrier, J. K., Jr. & Parsons, S. Use of a non-speech mode for teaching language. Paper presented at convention of the American Speech & Hearing Association, Chicago, 1971.

Skinner, B. F. *Verbal Behavior*, New York: Appleton-Century-Crofts, 1957.

AN EVOLUTIONARY PROCESS IN DEVELOPING A CHEMISTRY PROGRAM AT THE MODEL SECONDARY SCHOOL FOR THE DEAF

William Hughes, Ph. D., Area Coordinator, Robert Wehrli, Science Instructor, Model Secondary School for the Deaf, Washington, D.C.

HISTORY AND BACKGROUND

Need for a chemistry program

The idea for a chemistry program at the Model Secondary School for the Deaf came early in 1972. An attempt was made to determine the science interests of students and to obtain their opinions of the science courses being offered. A questionnaire was developed to elicit that information.

In general, the students were supportive of the science courses. However, the data revealed that a significant number of students were interested in participating in a chemistry program. This was particularly impressive since the word "chemistry" did not appear on the questionnaire and the only contact that any of the students had with the course was through a one week orientation to the subject. About twelve students participated in that orientation. When twenty-three of the 104 students responding to the questionnaire listed "chemistry" as a possible course offering, the response was considered overwhelming.

Four chemistry mini-courses previously had been designated for development. During a 1971 summer workshop, objectives had been written for seven units to be included in the mini-courses. So, in a sense, the need for developing chemistry materials had been anticipated.

However, the science department was reluctant to proceed with the seven units defined in the 1971 summer workshop for two reasons. First, there was a departmental concern for an interdisciplinary approach to chemistry. Second, the department was interested in finding commercially prepared materials with about a third grade reading level that could be adapted to the needs of our students.

Interdisciplinary approach to chemistry

After searching the literature, one program, an Interdisciplinary Approach to Chemistry[1] (IAC) seemed to meet some of our requirements. The program consisted of eight modules. The eight modules included an introductory module, Reactions and Reasons, and seven others, Inorganic Balance, Organic Chemistry, Biochemistry, Nuclear Concepts, Environmental Balance, Geochemistry, and Physical Chemistry. The individual modules, each with a separate text, seemed ideal as resource materials for several mini-courses. Furthermore, the chemistry objectives developed at the 1971 summer workshop seemed to coincide with the first IAC module, Reaction and Reason.

---

[1] Gordon Atkinson and Henry Heikkinen. *Interdisciplinary Approaches to Chemistry.* (New York: Harper and Row, Publishers, 1973).

The text, Reaction and Reason, was not at a third grade reading level but the amount of reading required for any one experiment was minimal. Classroom explanations and activities were expected to convey most of the information. The readings were expected to reinforce the classroom activities.

I.A.C. trial

In the spring of 1973, fourteen students began a laboratory oriented course using the I.A.C. text, Reaction and Reason.

It was the original intent of the staff to provide a strong motivational setting to stimulate the interest of the students. It was hoped that they would want to pursue a more detailed study of chemistry using an interdisciplinary approach.

An evaluation of the initial effort showed that the fourteen students completing the introductory module were highly motivated. The I.A.C. content tests showed that the students performed from average to well above average. On a questionnaire, the students suggested that more concepts be presented and that there be more media presentations of the content to make the course more meaningful. Most of the students gave the course a favorable rating.

Supplementary materials provided

The evaluation showed the need for supplementary materials. Activity sheets were written for each chapter in the book to try to explain the chemistry experiments. Also, a series of questions were developoped for each experiment. They were designed to challenge the student to do some critical thinking about the experiment and to help them make inferences and draw conclusions.

At this point, fourteen more students were started through the revised course. Their reading level was not as high as the first group. Their enthusiasm was high, but it was nearly impossible for them to manage the activities on a daily basis because the written instructions didn't seem to do the job.

More detailed activity sheets had to be written as the students were going through the course. The second group covered only about three-fourths as much material as the first group.

MSSD development

It became apparent that the I.A.C. program could not be used effectively, even with supplementary materials, with low level readers. It was decided to break with the I.A.C. program and write objectives specifically for the MSSD students. It is this group of objectives that led to the multi-activity, multi-media approach to chemistry that is presently used.

PRESENT MSSD CHEMISTRY PROGRAM

The chemistry program used at the MSSD consists of a number of integrated parts. Each part is intended to provide the students with information through different media and materials. Through this multi-media, multi-activity approach to learning, each student can find the materials and activities that he can learn best from. He can make his own decisions related to content and curriculum development.

The present chemistry program includes "scientific procedures", 8 I.P.'s on "physical properties", 10 I.P.'s on "matter" (chemical properties) and 13 I.P.'s on "atomic theory".

The instructional units include:

1. Objectives

The unit objectives are stated in behavioral form. The objectives are intended to make clear to students and teachers what the students should be able to do as a result of the instructional program. The objectives provide a guide for student activities and act to motivate him toward achieving the unit objectives.

2. Activities and materials

The major portion of the Chemistry Program consists of the student and teacher activities and related materials. The activities provide a way for the students to achieve their objectives. The activities and materials include:

a. Textbook.—The textbook used with the program is *Reaction and Reason*, by Gordon Atkinson and Henry Heikkinen and is a part of the Interdisciplinary Approaches to Chemistry (IAC) Program. This book is the introductory module and introduces basic concepts and skills in chemistry. Topics included in the book are Chemistry: A Human Activity, Measuring, Matter, Investigating Physical Properties, Matter in Motion, Chemical Changes, The Structure of Atoms, The Language of Chemistry, The Mole Concept, Chemical Bonding, and Shapes of Molecules. The primary objective of the text is to popularize chemistry and to reach out to a much larger audience of students. The instruction of modules are interchangeable and lend themselves to mini-courses and self-pacing.

b. Printed materials.—A number of printed materials are used in addition to the textbook. These materials contain programmed instruction materials, laboratory experiment descriptions, explanations of chemical phenomena, computer program descriptions and other items. Each student has a set of the printed materials and can work through them at his own pace.

c. Video tapes.—Extensive use has been made of video tapes. The tapes are usually "signed" by the instructor to describe class situations, provide information, and show demonstrations. The students obtain the tapes from the instructor and use them as they need them. The teacher is freed from the task of repeating everything for each student as they progress through the program.

d. Film loops.—A number of 8-mm film loops are used to demonstrate experiments and raise questions about chemical processes. Usually these are fast-paced with a lot of action. The students check them out and use them as they progress through the program.

e. Laboratory experiments.—Laboratory experiments are an integral part of the program. Laboratory experiments are used to permit the students to explore the nature of chemical processes and to illustrate principles. Often the materials used in the film loops are made available for the students to duplicate the experiments seen in the loops.

f. Filmstrips.—Occasionally, film strips are used to teach specific skills or concepts, such as the correct method to weigh materials or read a graduated cylinder.

g. *Computer programs.*—Computers are used to simulate laboratory situations. Experimental situations are represented by a set of equations programmed into the computer. The student inputs a set of initial values. The computer generates data like he would have collected in a laboratory experiment.

The student activities in conducting a computer experiment are similar to those involved when conducting an actual experiment. Both investigations are started by asking pertinent questions about the situation. In a laboratory experiment, the student would manipulate the laboratory equipment or apparatus to obtain the data required. In a computer experiment, the student would manipulate the input and output data through the use of a computer terminal. Once the data is obtained, whether by laboratory equipment or by computer, the objective is to determine relationships from the data by curve plotting and data analysis.

h. *Discussions.*—An important part of the program are the group discussions between students and teachers. The discussion provides an opportunity for sharing results of experiments and conclusions reached from the various activities. The students interact with other students and the teacher to clarify concepts and extend their ideas. It is through discussions that the students are able to compare their ideas with their peers.

i. *Games.*—Three game situations are now being used to help students with drill and practice activities. One of the games consists of a series of discs with the names of the elements on one side and their symbols on the other. The discs have different colors for gases, liquids, and solids. The simplest game is played by placing the discs name side down. In teams, the students attempt to match name and symbol. As they become more knowledgeable, they move to grouping them into solids, liquids, and gases. Two other games, "The Littlefield Finger Maze" and "The Mouse in the Maze" are used to generate data for analysis.

3. Self-evaluation

Each student participates in a self-evaluation of his progress through the program. The self-evaluation consists of:

a. A daily log in.—The student records the activities he participated in during the class period and includes a brief analysis of those activities.

b. A self-evaluation test.—A self-evaluation test is included in the packaged printed materials. The test includes items related to the unit objectives. Answers are provided to the student at the conclusion of his self-evaluation test. The students have an opportunity to determine if they have met the objectives and to correct any deficiencies.

4. Reality testing

The student's progress through the program is charted by the teacher for reporting purposes and for student planning. The teacher prepares:

a. *A progress chart on each student.*—The progress chart shows the number of activities completed and the time required for the activities.

b. *A report of observations and discussions with the students.*—The teacher determines content progress through classroom observations and individual discussions.

PROGRAM EVOLUTION

The process used by the MSSD science staff in developing the chemistry program provides a model for course development in other settings. The steps followed were: (1) a need was identified; (2) initial objectives were prepared; (3) materials were obtained or prepared; (4) materials were used and evaluated; (5) revisions and modifications were made; and (6) the program was re-evaluated and refined.

It should be noted that this is an on-going process. Course development is never finished.

HEARING IMPAIRED MENTALLY RETARDED

William Healy and Doreen E. Karp-Nortman, American Speech and Hearing Association

Until recently, few comprehensive programs have been available for persons with the dual handicap of severe hearing loss and mental retardation. On both national and state levels, the long range needs of these individuals too often were excluded from comprehensive program planning. Consequently, public and private residential facilities for the deaf or the mentally retarded became primary placement sources regardless of their ability and resources for coping with the compounding effects of two disabilities. Primary emphasis on treating only one disability in turn precludes maximum achievement by those who are both hearing impaired and mentally retarded. A broad spectrum of services and a consistently appropriate financial base is needed to meet adequately the changing needs of all learners with such developmental disabilities.

The hearing impaired mentally retarded population (hereinafter referred to as the HIMR purely for the sake of brevity) [1] has come into current focus not only because of instructional and management problems experienced in schools for the deaf and institutions for the mentally retarded, but also as a result of recent litigation reaffirming the legal as well as moral and ethical responsibilities of the society to provide public education for all handicapped children (D.C.D.C., A.A. No. 1939–71, August 1, 1972 and C.A. No. 71–42, June 18, 1971).

The ASHA project

Recognition of the legal obligation to provide comprehensive services and current studies showing many of the HIMR population as either inappropriately served or deprived of services has sparked a new interest in this dual handicap. To address some of the pressing needs, the American Speech and Hearing Association (ASHA) in 1972 submitted a competitive proposal to the Rehabilitation Services Administration, Division of Developmental Disabilities, which subsequently was funded and entitled "The Rehabilitation and Management of the

---

[1] It is not the intention of the authors that these initials become a new label for this population.

Hearing Impaired Mentally Retarded." The project objectives called for ASHA to:

1. Review and synthesize available literature concerning persons with this dual handicap;
2. Collect data and information regarding present research, training and service programs;
3. Publish an action brochure to give the needs of this population more visibility;[2]
4. Evaluate existing manpower needs for purposes of making recommendations on future manpower training and utilization; and,
5. Develop guidelines and recommendations for achieving comprehensive services.

The Conference of Executives of American Schools for the Deaf (CEASD) and the American Association on Mental Deficiency (AAMD) cooperated with the ASHA in appointing representatives to a Steering Committee charged with the responsibility of assisting the project staff in their efforts to meet the project objectives.

The ASHA Project Staff and Steering Committee refined the project procedures and met with national, state, and local personnel at two national conferences to identify key issues and develop recommendations regarding comprehensive services for HIMR persons. In addition, site visits to programs for the hearing impaired mentally retarded allowed the Project Staff to interview program administrators and instructors, observe current practices and document program needs. Finally, a manual was published entitled, "The Hearing Impaired Mentally Retarded: Recommendations for Action." In developing this document, the Steering Committee and Project Staff were confronted with multiple issues:

1. An acceptable definition of the population did not exist.
2. Incidence and prevalence figures on which to base future programming and training of new personnel were contradictory.
3. Literature describing comprehensive programs designed to deal effectively with the diagnostic, educational, and rehabilitative needs of the population (including vocational training, living and work arrangements, recreational services and so on) was sparse.
4. Present methods of manpower utilization were in a state of flux.
5. No agreement seemed to exist on criteria for preparation of the various professionals needed to serve in such programs.
6. The development of comprehensive community-based programs for HIMR adults (for example, group homes or half-way houses, sheltered living-work environments, work study programs, on-the-job training, legal services, and recreational services) seemed to be the responsibility of no single agency or agencies charged with coordinated planning.
7. The identification of promising methods for teaching speech, language, cognitive and other communication skills to this population remains controversial.
8. Plans for coordinating lifetime services among the education, health and social service agencies were just beginning to be formulated.
9. Many state education departments did not enforce existing mandates for services at the state or local level.

---

[2] This brochure entitled, the "Deaf Mentally Retarded, Understanding Their World," can be purchased from: The ERIC Clearinghouse on Handicapped and Gifted Children.

10. Data on program costs were based on existing services and not on services needed in comprehensive programs.

The final document addresses many of these issues, includes salient aspects of comprehensive programming, and is designed to assist individuals and agencies who have major responsibilities for effecting long-range plans in manpower development and utilization as well as service program organizations, management, and evaluation. Legislation and recent court decisions reaffirming the rights of this dually-handicapped population are cited. General educational, vocational, and social needs are identified and sources of additional information are listed.

Prevalence of persons with hearing loss and mental retardation

Presently the precise number of persons with severe hearing loss and mental retardation in the United States is unknown and will remain so until additional formal studies and more appropriate services become available. However, current prevalence studies do reveal that several thousand persons have been diagnosed as having this dual handicap. Craig and Craig (1973) report that 17 percent of the children in schools for the deaf are mentally retarded, and Lloyd and Moore (1972) cite 15 percent of children in schools for the mentally retarded as hearing impaired. Johnston and Farrell (1954), Kodman (1958), Siegenthaler and Krzywicki (1959), Rittmanic (1959), Lloyd and Reid (1967), Nober (1968), and Fulton and Lloyd (1968), among others, report the incidence of mild to profound hearing loss to be significantly higher among persons with mental retardation than within the normal population. In a recent study by Bensberg (1974), officials in state residential institutions for the mentally retarded (children and adults) reported hearing loss for 10 percent of the population. Since some institutions do not have routine audiologic services, it is axiomatic that hearing loss in many patients often is undetected or detected much later than it should be to provide appropriate instructional and habilitative programs. A 10 percent prevalence of hearing loss among the nearly 300,000 persons with mental retardation in public institutions alone yields a conservative figure of 30,000.

Currently available data suggest that nine of every ten persons with severe to profound hearing loss and mental retardation are confined to public institutions for the mentally retarded. Few receive services through community integrated programs or in residential schools for the deaf (Task Force Report on the Mentally Retarded/Deaf, 1973). Data from the 1972–1973 Annual Survey of Hearing Impaired Children, Office of Demographic Studies, show the prevalence of mental retardation among children in programs for the hearing impaired to exceed 7 percent.

Data on hearing loss from day schools and private institutions for the mentally retarded are not available. However, data from state education agencies show that approximately 1,300,000 children have mild to profound mental retardation (Weintraub, Abeson, Braddock, 1971). If a 10 percent estimate of hearing loss (per Bensberg's data) was applied ot this population and combined with the estimate of mentally retarded adults who have significant hearing loss, the number of HIMR persons increases drastically to at least 165,000.

A continuum of services

A comprehensive program plan for the hearing impaired mentally retarded population must include a broad continuum of services. Many of the essential services are outlined in Figure 1.

	CONTINUUM COMPONENTS		
Population Served	Persons with severe hearing impairment and mental retardation (HIMR)	Persons with moderate HIMR	Persons with mild HIMR.
Program Goals	1. Provide prevention programs	→	→
	2. Provide direct intensive individualized and group lifetime services when necessary to effect maximum development	→	Provide necessary sequenced support activities to help develop appropriate behaviors in social, educational, and vocational contexts
	3. Provide information and assistance to all program participants	→	→
Services Provided*	1. Identification	→	→
	2. Comprehensive interdisciplinary assessment (diagnostic evaluation)	→	→
	3. Referral (for additional services)	→	→
	4. Parent or guardian counseling and instruction	→	→
	5. Client counseling and placement	→	→
	6. Staff counseling and in-service orientation/instruction	→	→
	7. Direct management (medical, educational, vocational, social, recreational)		Direct or Indirect Management
	8. Program evaluation	→	→
	9. Individual reassessment	→	Consultation (for individual client or groups)
	10. Dismissal and follow-up	→	→
	11. Research	→	→
	12. Record and data maintenance	→	→
Program Types and Alternatives*	1. Diagnostic center placement	→	→
	2. Special-class educational placement	Special-class educational placement or resource room placement	Regular educational placement with supportive services or resource room services
	3. Vocational placement	→	→
	a. Prevocational services	→	→
	b. Work-study program (emphasis on individual work skills and attitudes)	→	→
	c. Sheltered workshops		
	d. Activity centers		
	e. Community employment	→	→
	4. Home or hospital services	→	→
	5. Parent/infant instruction	→	→
	6. Community and residential placement		
	7. Organized recreation	→	→
	8. Special living arrangements	→	→
Participants (most common)	Parents, teachers, administrators, aides, rehabilitation counselors, psychologists, physicians, psychiatrists, social workers, nurses, occupational therapists, physical therapists, dentists, audiologists, speech pathologists, recreational specialists, employers		

*Transportation purchased services may be required to facilitate provision of a service continuum.

FIGURE 1.—The continuum of services for children and adults with hearing impairment and mental retardation.

Current trends/needs

A new era of concern and action on behalf of the handicapped occurred in 1972 with the establishment of a national goal for full, quality services. This goal was adopted by the U.S. Office of Education and was complemented by Congressional efforts in increasing funding. In addition, the President outlined several objectives designed to:

1. Reduce by half the occurrence of mental retardation and other

handicapping conditions in the United States before the end of this century; and,

2. Enable one-third of the more than 200,000 retarded persons in public institutions to return to useful lives in the community.

The national goal has provided us with a more positive outlook and has reoriented the thinking and planning of governmental agencies at the national, state, and local levels. Many program administrators and related staff are establishing objectives and priority activities to meet the needs of severely or multiply handicapped populations in an effort to achieve the goal of quality, comprehensive services.

Our grant activities also revealed several interesting trends. For example, the State of Illinois advised us that they have developed a central registry, or data tracking system, that specifically maintains information on HIMR persons and can be used for comprehensive planning in their state. Further, the Office of Demographic Studies at Gallaudet College expanded its data tracking system to include HIMR persons nationally. The University of Wisconsin, Kent State University, Texas Tech, and the University of Tennessee among others reported that they are planning or have implemented teacher training programs specifically concerned with serving persons with multiple handicaps. In addition, heightened interest in the HIMR population has resulted in more definitive court actions.

Case v. *California* (4 Civil 12127, Superior Court of Appeal, Fourth District, State of California, July 16, 1974) is just one illustration of this trend where the parents of a child with severe handicaps including hearing impairment and mental retardation sued the State to obtain a proper placement for their daughter. Similar cases recently have reaffirmed many rights of the severely disabled. Finally, some professional groups such as the Council of Speech and Hearing Consultants in State Departments of Education have passed resolutions to include material from the ASHA document and related studies in all state plans for handicapped children.

The major concerns of those persons working with the HIMR population include: (a) delineation and implementation of competency-based professional/paraprofessional preparation programs; (b) development of curriculum guides and materials designed specifically to accommodate the needs of HIMR persons; (c) employment of more educators of the hearing-impaired, speech pathologists and audiologists in programs for the mentally retarded; (d) enforcement of legislation mandating appropriate education and due process procedures that protect the rights of the handicapped; and (e) development of coordinated plans and evaluation procedures to ensure program effectiveness and full, quality services.

Conclusion

We hope the ASHA project on the hearing impaired mentally retarded will serve as a catalyst in arousing attention to the current unmet needs of this population and will stimulate the development of more comprehensive services. Although programming for the severely and multiply handicapped has become a national priority, gross inequities in the availability of services can be identified in every state. National, state, and local officials must strive cooperatively to change the current self-perpetuating status of inequality for these children as learners and this population as citizens.

REFERENCES

1. Bensberg, G. J., and Clark, A. C., A study on: *Hearing Impaired Mentally Retarded Persons in State and Private Facilities for the Retarded.* Lubbock, Texas: Research and Training Center in Mental Retardation, Texas Tech University (1974).

2. Craig, W. N., and Craig, H. B. (Eds.), Directory of programs and services. *American Annals of the Deaf*, 118:2 (April 1973).

3. Fulton, R. T., and Lloyd, L. L., Hearing impairment in a population of children with Down's Syndrome. *American Journal of Mental Deficiency*, 2, 298-302 (1968).

4. Johnston, P. W., and Farrell, M. J., Auditory impairments among resident school children at the Walter E. Fernald State School. *American Journal of Mental Deficiency*, 58, 640–643 (1954).

5. Kodman, F., The incidence of hearing loss in mentally retarded children. *American Journal of Mental Deficiency*, 62, 685–688 (1958).

6. Lloyd, L. L., and Moore, E. J., Audiology. *Mental Retardation*, Vol. IV. New York: Grune and Stratton, 141–163 (1972).

7. Lloyd, L. L., and Reid, M. J., The incidence of hearing impairment in an institutionalized, mentally retarded population. *American Journal of Mental Deficiency*, 71, 746–763 (1967).

8. Nober, E., *The Audiometric Assessment of Mentally Retarded Patients.* Syracuse, New York: Syracuse University Division of Special Education (1968).

9. Right to Public Education: Mills v. D.C. (D.C.D.C., A.A. No. 1939–71, Auguest 1, 1972); PARC v. Commonwealth (C.A. No. 71–42, June 18, 1971).

10. Rittmanic, P. A., Hearing rehabilitation for the institutionalized mentally retarded. *American Journal of Mental Deficiency*, 63, 778–783 (1959).

11. Siegenthaler, B. M., and Krzywicki, D. F., Incidence and patterns of hearing loss among an adult mentally retarded population. *American Journal of Mental Deficiency*, 64, 444–459 (1959).

12. Weintraub, F. J., Abeson, A. R., and Braddock, D. L., *State Law and Education of Handicapped Children: Issues and Recommendations.* Arlington: Council for Exceptional Children (1971).

PARENTS OF MULTIPLY HANDICAPPED DEAF CHILDREN

Doris Naiman, Ph. D., Gail Turney, M.A., Keith Muller, M.S.W., New York University Deafness Research and Training Center, New York, N.Y.

New York University's Deafness Research & Training Center has just completed one year of a multi-faceted program for parents of multiply handicapped deaf children at New York City Public School for the Deaf JHS 47. Supported by a grant from the Kugel Foundation and the Rehabilitation Services Administration, the Deafness Center has been able to provide effective assistance for a group of parents who needed help and had been difficult to reach. A description of the approaches, experiences and results of this project may be useful to schools in providing assistance to parents who have special problems and do not participate readily in traditional parent programs.

The program was provided for the parents of 21 multiply handicapped children who had been accepted into four special classes that were established in September, 1973, at New York City Public School for the Deaf JHS 47. The classes enrolled children who presented maladaptive behaviors so severe that they could not function in regular classes for deaf children. The children had been selected by the school administration, teachers, and consultants from the Bureau of Child Guidance. Many of the children would not have been allowed to remain in school were it not for this special placement. The goals of the teachers were to help the children change their maladaptive behaviors to acceptable behaviors that would allow them to function in regular classes for deaf children. It was important that the children receive support at home to reinforce the help they were receiving at school.

All except one of the parents were normal hearing and needed knowledge about deafness and help with accepting their deaf children. Most of the parents had severe economic and social problems in addition to the specific problems related to their deaf children. Twelve of the families were without a father. Fifteen families depended on public assistance for all or part of their income. Twenty of the families were Black or Puerto Rican.

The staff planned a program which would involve the entire family and be responsive to its overall social and economic situation. Approaches used in the program were:

1. To assist parents in alleviating economic and social problems that interfered with their ability to cope with their deaf children.

2. To enable parents to handle their emotional reactions to deafness and thereby increase positive parent-child interaction.

3. To provide parents with knowledge about deafness and deaf people.

4. To teach parents to communicate effectively with their deaf children.

5. To teach parents effective methods of handling their deaf children in everyday situations which have caused problems.

6. To make available to parents the possibility of obtaining for their deaf child a relationship with an older, deaf person of the same sex who is well adjusted and can provide a positive model.

In the beginning, a series of individual home visits was made to each family. The purpose was to get parents actively involved in a process of change that would motivate them to participate in group programs. The home visits were a necessary and valuable first step in reaching these hard-to-reach parents.

Initial home visits provided an opportunity for staff members to discuss with parents their family situation and the ways in which the deaf child fit into that structure. Staff members assisted parents in identifying problems in various areas, from financial to managing their deaf child's emotional behavior. Parents took an active role in discussing their problems and in determining a plan of action.

At first, the staff focused on areas that would achieve more immediate results. This reinforced commitment to further involvement. Many families were directed to a social service agency which could provide a service. One contact was often sufficient. Communication instruction was also initiated during the first home visit, to improve parent-child communication.

Narrative descriptions of home visits were used to determine progress in family plans. The plans were then revised to meet the economic and psychosocial needs which were most current. Social service assistance was rendered to parents by first giving information on how to obtain assistance and then making an appropriate referral. When this was not possible for lack of an appropriate agency or inadequate independence in the family, the staff provided direct case services. The staff also served as liaisons in family-agency interactions.

This approach yielded positive results in several areas. Seventeen families, previously unaware of financial support through the new supplemental security income program (SSI), took advantage of the program. Assistance was also given to several parents in dealing with problems of hearing siblings.

All parents in the program wanted to improve communication with their deaf child. The children's classroom program used the total communication approach, and all of the children utilized manual communication to supplement their as yet poorly developed oral skills. Only two of the parents, however, were familiar with sign language, and parent-child communication in most families was restricted to gesture and pantomime. Parental interest in manual communication served to involve the parents in an activity which directly affected their relationship with their child.

A standard curriculum approach was not used with this group. Instead, the parents were encouraged to request specific signs and situations where they felt at a loss to communicate. They were encouraged to use any combination of signs, gestures, facial expression and graphic aides necessary to supplement their speech.

Materials designed to support the functionally oriented manual communication instruction were shared with families. Staff members developed a series of booklets illustrating possible uses of idiomatic expressions in everyday situations. Booklets were printed in both Spanish and English. The booklets, as well as commercially available games and books, were used with families both as teaching aids and as activities for family interaction. The booklets were used so extensively by the families that the phrases they illustrated became some of the most frequently seen signs in parents' spontaneous vocabularies. All families were provided with the staff-developed booklets, one sign language reference book, and a book entitled "*Handtalk*" (Charlip, Miller and Ancona, 1974) which illustrates the beauty of sign language and served to increase acceptance of deafness.

Deaf children were active participants in the instruction. Whenever possible, manual communication instruction was offered at a time when the deaf child could participate, often in the role of teacher. This insured that all signs taught to the family were within the experience of the children and provided ample opportunity for staff members to demonstrate effective communication techniques and to monitor parents' progress in using their new skills to actually communicate with their children.

By involving entire families, grandparents, neighbors, and friends, communication instruction became a lively and pleasant activity. The child participated as a member of the community. This approach enhanced the sessions by involving fellow students to practice and review.

Because the instruction focused on parent-generated situations many phrases useful in controlling behavior were discussed. This development directly affected the ability of parents to manage the deaf child's behavior and change long established behavior patterns. As more emphasis was placed on verbal management of behavior, an increase in mutual understanding and reduction of frustration occurred. Many misunderstandings in parent child interactions were eliminated with increased knowledge of signs. One mother expressed feelings of regret when she recalled how frequently she had ignored or punished her son's attempts to communicate: "I just thought they were silly hand games. When he signed 'Good morning' to me, I thought it was making a dirty gesture and I hit him."

Parents' feelings of guilt and anger about their child's deafness were common and initially were difficult to express in a direct way. Staff members encouraged parents to discuss their feelings about situations and taught signs to express those emotions. Parents began to talk more comfortably about their feelings toward their deaf children. One mother, while learning signs for emotions, began to discuss her feelings about taking her deaf son shopping. "I'm so embarrassed when people stare at us because of his hearing aids and his voice. I hate to go shopping."

Positive feelings were also reinforced through communication skills training. One great grandmother's eyes filled with tears when she learned the sign for love. "My great granddaughter says that to me all the time: I never realized how much she liked me."

As progress was being made with families during individual home visits and parent-child interactions were showing improvement, parents began to demonstrate their willingness to participate in group activities and discussions related to their deaf children. Participation in groups served to reduce parents' feeling of loneliness and isolation and provided a source of mutual support and understanding. Alternative solutions to common problems were generated.

To accommodate the special needs of all parents, a group program was established at the school during school hours and several small neighborhood groups met during evening hours in parents' homes or community buildings. Car pools were arranged and special arrangements were made to supervise young children when necessary. One effective group activity was an all-day Saturday program involving entire families. The day's activities were structured to immerse the parents, deaf children and their siblings in an environment in which they were interacting with deaf people and learning manual communication skills.

Most families in the program had never had contact with a deaf adult. For this reason, well adjusted deaf adults were involved in every facet of the program. A program similar to Big Brothers of America was designed, recruiting adults from the deaf community. This opportunity for interaction meant a great deal to children who had limited contact with deaf people and was especially important to those living in single-parent homes.

Special adaptations in all areas of the program were made for Spanish speaking families. Staff members of Spanish background were used in some cases to facilitate communication. All booklets were captioned in both Spanish and English. One parent group was composed of only Spanish families, which allowed for special focus on the unique problems of this group.

Evaluation of the program was made using structured interviews, a specially designed self-rating scale, knowledge of deafness test, information from family files and staff observations. The results demonstrated change in parental attitude and knowledge. 9 of the 21 children were able to be placed in regular classrooms after nine months of involvement in the program. These results give positive indication that the positive changes at home contributed to the changes at school. The approaches and techniques developed in the program for parents did make a positive difference in the behavior of the children.

MAXIMIZING HEARING AID USAGE IN A PUBLIC DAY SCHOOL FOR THE DEAF

Susanne Kos, Educational Audiologist, Callier Center for Communication Disorders, Dallas, Tex. and Melissa R. Scott, Elementary Supervisor, Stonewall Jackson School, Dallas County-Wide Day School for the Deaf, Dallas, Tex.

The object of this discussion is to describe a project designed to maximize hearing aid usage on a public elementary day school campus for the deaf. The study was concerned not only with developing intrinsic motivational attitudes in the children toward daily wearing of amplification but also with maintaining consistent and appropriate auditory stimulation.

Stonewall Jackson School serves as the elementary facility of the four-campus Dallas County-Wide Day School for the Deaf. At the time of the study, this public school housed approximately 140 eight to fourteen year old hearing impaired students. A variety of instructional arrangements and personnel include self-contained classes, team-teaching situations, platoon classes, and a resource teacher for integrated students.

Decision to adopt personal or group amplification

In the fall of 1972, as the educational philosophy was shifting from an oral to a total communication approach, it appeared that a more consistent form of auditory stimulation was needed in order to retain the aural aspect of total communication. One of the goals of this project was to identify which type of auditory input would be satisfactory for deaf students on the Stonewall Jackson campus. The choice was between group amplification and individual electro-acoustic instrumentation.

Prior to this date, four different types of auditory training equipment was available. There were several reasons the instrumentation was not being used. Two of the systems required that bulky bodyborne units be worn, which were not cosmetically appealing to the older children. The use of group units was impractical because of the time-consuming nature of students changing body apparatus and teachers coordinating matching-frequency microphones. The teachers' lack of sophistication in the use of auditory training equipment often acted as a deterrent in monitoring its function. (*1*) Finally, repair and maintenance services on the existing auditory training units had been unsatisfactory.

Personal hearing aids afford great flexibility for the children; however, they impose extreme acoustical requirements on the classroom building. (*2*) The physical surroundings and negative classroom acoustics made for a less than utopian environment for any amplifying system. It is difficult to show any significant improvement in the use of hearing aids on telecoil settings used for group amplifiers as compared to their operation on microphone inputs. (3) As the distance between the teacher's voice and the individual hearing aid microphone increases, intelligibility decreases. (4) In the fact of the pros and cons of the mechanics of most beneficial amplification and the psychological side effects of the wearer, the time appeared to be appropriate for shifting the emphasis to personal amplification.

Roles of school personnel

The campus supervisor spearheaded the initial thrust of the amplification program. After examining the first year's data, she assumed a maintenance role to perpetuate the status quo. The educational audiologist served as the primary coordinator in the management of service. Duties of the audiologist consist of assessing hearing acuity, evaluating hearing aids, recommending appropriate amplification, reporting findings to parents, teacher, school nurse and physician, and referring to otologists or health agencies. The psycho-educational diagnostician designed the motivational procedures used with the students to encourage daily wearing of amplification. The services of the educational audiologist and the diagnostician are contracted from Callier Center for Communication Disorders. The visiting teacher acted as liaison for parents needing assistance in making and keeping appointments with health agencies. She was often called upon to provide transportation and interpretative services.

Amplification provisions

Initially, the audiologist inventoried the usage of hearing aids in the classroom. Inquiries were made of the teachers, students, and parents. Teachers first listed those children wearing aids in the classroom. The audiologist then asked the remaining pupils having hearing instruments at home to bring them to school for inspection. Parents of children, who stated they did not have aids, or who did not bring them to school, were then contacted.

Finally, all personally owned instruments were made operable, and school loaner hearing aids were assigned to children who did not have their own aids. Training aids from the group auditory units were incorporated into the loaner hearing aid stock. Additional aids, usually post-auricular models, were donated by local church groups through solicitation in their news bulletins. Requests of local service organizations or applications to the state hearing aid program helped to provide hearing aids for some pupils whose families indicated financial need.

The second stage of the procedure involved a physical check of the hearing instrument's components including the general appearance, batteries, earmolds, volume and tone controls, tubing, receivers, and cords. All children whose amplification appeared to be inappropriate had complete hearing aid evaluations or repair or replacement of faulty hearing aid parts. Loaner instruments were also made available to any student while his own aid was being repaired, and a stock of replacement parts was provided through the school.

Earmold impressions were made on location. An ultrasonic device for cleaning earmolds was located in the clinic and teachers were encouraged to instruct their students in its use as part of their personal hygiene curriculum. Those students whose parents could afford the responsibility of maintaining their aids were asked to reimburse the school for any expenses incurred in replacing parts at school.

Additional classroom activities in hearing aid management involved a routine check of the hearing aid components. Each classroom was provided with a battery tester and an appropriate supply of batteries to facilitate this activity. The teachers were asked to complete, and turn in with the daily attendance record, a pink slip indicating any gross mechanical defects of their children's aids. The review and disposition of pink slip comments and requests then became the audiologist's responsibility. The pink slip reports were handled within the same day. This system afforded a continual hearing aid follow-up service for all the children. A full in-service training program was organized for the teachers to stress the functional purposes of amplification and acquaint and orient them to the physical parameters of hearing aids.

Behavior management strategy

Behavior modification procdures were set up to induce maximum hearing aid usage at school. The program consisted of three phases. During the initial phase, concrete reinforcement was delivered on a fixed schedule. The second phase involved positive social reinforcement administered by school personnel. The final phase was a maintenance function sustained by the intrinsic attitudes of the students.

In the initial phase, students possessing an aid, functioning or not, or students who brought explanatory notes, were rewarded with a token or ticket redeemable immediately in the school cafeteria for juice. Before-class rap sessions of timely topics replaced the juice reinforcement. Later, the students were invited to rock music dances arranged at random intervals. A coin replica banking operation added sophistication to the extrinsic reinforcers already in use. These activities culminated in the establishment of a school-wide store of trinkets, etc. Students handled all transactions. Reinforcement used with the younger children consisted of free-time, supervised play, bright stickers on wall charts or military stripes affixed temporarily to their clothing, and the viewing of entertaining films.

At the beginning of the second phase in the fall of 1973, the classroom teachers and teacher aides assumed responsibility for reinforcing the students during the routine morning survey of the hearing aid components. This was done in a positive manner with praise and compliments. In a few incidences some students continued to demonstrate a need for concrete reinforcement. In the fall of 1974, data indicated that a positive climate toward amplification had been established on the Stonewall Jackson campus.

Results

The results, derived from tallies of the daily pink slips, form a longitudinal study of the hearing aid wearing habits of these children over a two-year time span. In November, 1972, the initial hearing aid inventory revealed that of 123 students, 91, or 75 per cent, possessed hearing instruments. Of those, only 51 or 56 per cent, were wearing their instruments voluntarily. A follow-up accounting in the fall of 1973 indicated that of the 141 students enrolled, 90 per cent were regularly wearing amplification. The most recent appraisal in the fall of 1974, showed that of the 144 students registered all either owned a hearing instrument or had a loaned aid assigned to them for classroom use. An average of 96 per cent of the students were aided each day. The data underscores the team's pride in achieving the ultimate objective: intrinsic use of personal amplification by the deaf students at Stonewall Jackson School elicited by the systematic and persistent use of various behavior modifiers.

Other advantages gained from the experience were:

1. The teachers have noted the paramount importance of daily hearing aid inspection and have incorporated the proper care of hearing aids into the routine curriculum.
2. The students appear to have become more cognizant of the operating level of their hearing aids and often report malfunctions themselves.
3. The parents have become accustomed to dealing with the educational audiologist and seek consultation regarding the purchase of new instruments.

Conclusion

In the quest for a quality program on the Stonewall Jackson elementary campus, future plans include acoustic treatment of the school building. The staff will re-examine the possibility of employing some group amplification now that a positive attitude toward personal hearing aid usage has been established. It is anticipated that individual sessions of intensive speech and auditory training will be initiated.

The extremely encouraging results of this study indicated that behavior modification, when consistently and systematically applied, can produce maximum use of amplification in the elementary school deaf child. The behavior modification program used in this study is simply one tool within a larger set of tools available to educators of hearing impaired children. It is not a magical procedure and must be viewed in context with the entire set of teaching techniques and attitudes.

REFERENCES

1. Matkin, N. D. and Olsen, W. O.: Induction Loop Amplification Systems: Classroom Performance. *ASHA*, 12: 239–244, 1970.
2. Hirsh, I. J.: Use of Amplification in Educating Deaf Children. *American Annals of the Deaf*, 113: 1046–1055, 1968.
3. Sung, R. J., Sung, G. S. and Hodgson, W. R.: A Comparative Study of Physical Characteristics of Hearing Aids on Microphone and Telecoil Inputs. *Audiology*, 13: 78–79, 1974.
4. Ross, M. and Giolas T.: Effect of Three Classroom Listening Conditions on Speech Intelligibility. *American Annals of the Deaf*, 116: 580–584, 1971.

STORAGE, ANALYSIS, AND RETRIEVAL OF AUDIOMETRIC DATA[1]

William Grant, Evaluation Specialist, Herbert Rosen, CAI-Computer Programmer, Model Secondary School for the Deaf, Washington, D.C.

This paper presents the description of a computer system for the storage, analysis, and retrieval of audiometric data. The system, designed for use with a CRT Terminal, is formated to be usable by persons not familiar with computer theory. The data input is numerical/alphanumeric and requires no coding. Persons capable of reading audiograms can translate data directly. Program commands and user information for adopters are included.

---

[1] Sincere thanks to Vern Larson, Central Michigan University, for his comments and suggestions. Work reported herein supported by funds from the U.S. Department of Health, Education, and Welfare. Public Law 89-694.

Instructional, research, and therapeutic programs for hearing impaired individuals are highly dependent on the degree of hearing loss of the student. Rapid access to audiometric information which has been analyzed using specific parameters might, therefore, increase the probability of success of such program.

Audiometric data which is largely numerical and easily coded, unlike narrative counseling reports, lends itself to the computer. Yet we know of few such programs. The program which do exist (for example, Coaker, 1973, 1974) are isolated without the possibility of generalized transfer of information. This paper is an attempt to move users toward a more standardized system of audiometric data storage, retrieval, and analysis. Included here are: a description of the program development, program commands, directions for users, and sample data outputs.

Description of the program

This computer program provides storage, retrieval, and analysis of audiometric data. Audiometric information which has been entered in the computer is stored for instant recall. Data may be entered, deleted, updated, or reviewed. The companion analysis program permits users to perform rapid analysis of group data.

The analysis program automatically computes the pure tone average for each ear based upon the entered data. Also calculated are the group mean, range, and standard deviation for each of the tested frequencies across all of the tested subjects.

The program as currently written utilizes a cathode ray tube (CRT) terminal for data input and review. The specific terminal in use is a Hazeltine 2000. The CRT has several advantages in this type of application:

1. The terminal can be operated by someone receiving a minimal amount of instruction and avoid the necessity of keypunching computer cards.
2. Data input and output are instantaneous (with the exception of hard copy) as both occur on the CRT screen during normal operation.
3. The Hazeltine 2000 terminal has the capacity for generating displays using two different intensities. Thus, a form-filling format is used with the form in one intensity and the entered data in a second. The presence of a foreground/background distinction greatly reduces user confusion.
4. The Hazeltine 2000 can be acoustically coupled with the main computer through a regular telephone. This feature permits placement of the terminal at a point convenient to the user.

Current program development

The audiologic data program has been in use for approximately one year.

During that time informal surveys conducted among users indicate high acceptability. A cooperative effort of the Kendall Demonstration Elementary School, the Model Secondary School for the Deaf, and Gallaudet College is taking place which will hopefully lead to a campus-wide standardized system of audiologic record keeping.

APPENDICES

Appendix A: Directions for program users is included.

The following appendices are available from the authors:

Appendix B: Input/Output Program. Gives information to computer programs for installing the input program.

Appendix C: Program for analysis of audiometric data. Computer commands for programmers wishing to install the analysis program.

Appendix D: Sample data printout. Copies of data as would be given in a hard copy printout.

Appendix E: MSSD audiologic record. The form currently used at the MSSD for hand recording and storage of audiologic information.

REFERENCES

Coaker, F. W. and Geers, A. V. The computer-oriented record-keeping system: Programmer's Manual—data entry. St. Louis: Central Institute for the Deaf, 1974.

Coaker, F. W. and Geers, A. V. The computer-oriented record-keeping system: User's manual—data entry. St. Louis: Central Institute for the Deaf, 1973.

APPENDIX A

DIRECTIONS FOR PROGRAM USERS

The program for the input of data has been structured to self-correct many of the most common user errors observed during the initial development program. Data which are obviously incorrect (i.e. use of next year's data) trigger a "bad data" signal and require the user to immediately verify entered data. The data check is used in each aspect of the data input program in order that most data errors are identified automatically.

Reference is made to information necessary for use at the MSSD. Users adapting the program at other sites will find it necessary to modify the instructions to comply with their own needs and limitations.

The LOGIN command is used to gain access to the computer system.

The following is the procedure for gaining access to the system.

NOTE.—The underlined portions are automatically typed by the system.

```
. LOGIN        ,
```

User types in the word LOGIN, then project and programmer numbers (,) followed by a carriage return (CR).

```
JOB 22 GALLAUDET 507A08 TTY 23
```

The system types the job number assigned to user, followed by name (GALLAUDET), version number and console line number.

```
PASSWORD: (          )
```

System requests user to type the password. User types password followed by . carriage return. To maintain password security, the password is unreadable on the screen.

```
1155 10-APR-75 THUR
```

If user entries are correct, responds with time, data, and a period (.) indicating readiness to accept a command.

```
⊥ RUN UPDAUD
```

The user types in the word RUN and the name of the program followed by a carriage return (CR). From this point on, the program will permit the editing of the audiometric data file.

The following data will appear on the screen in light intensity print. The data typed in by the user will appear in strong intensity print in the foreground.

```
              AUDIOMETRIC FILE UPDATE PROGRAM

Type of Operation (New, Update, Delete, Rtval)—
Student Name—
Date of Hearing Test—
    For Right Ear
.125  .25  .5  .75  1.0  1.5  2.0  3.0  4.0  6.0  8.0
    For Left Ear
.125  .25  .5  .75  1.0  1.5  2.0  3.0  4.0  6.0  8.0
                                   Ready—
```

To edit or retrieve the audiometric data file, the user should type in his instruction (one of the four below).

a. NEW—insert a new student's record into the data file
b. UPDATE—replace the student's old record with the new one in the data file
c. DELETE—delete the student record from the data file (NOTE: only student name needs to be typed in)
d. RTVAL—retrieve the specified student record from the data file to be displayed on the screen. The purpose is to get information on the student and, if needed, to verify the information. (NOTE: only the student's name needs to be typed in)
e. END—terminate the use of the program

After each portion of the data is entered, the user should type carriage return (CR). This is after the type of operation, name, date, and each entry of audiometric data. (The (CR) command cycles the input program through the self-check loop to identify obviously erroneous data. The (CR) also prepares the program to accept the next set of data.

Upon completion of manipulation, the cue READY will appear. If satisfied, type YES and the data input will be processed into the master data file. If incorrect, type NO and start over.

As the entire stored audiometric information for an individual student will be displayed at this time if any but DELETE commands are in use, the user should use this facet of the program to check the data for errors or omissions.

After retrieving information, when ready for the next step, type YES to the cue READY and the data in foreground will be wiped off the screen and the user may select NEW, UPDATE, DELETE, or RTVAL.

```
⊥ RUN AUDIO
```

The user types in the word RUN and the name of the program followed by a carriage return (CR). Then this run will process the master data file for audiometric analysis.

```
* PRINT ABC.DAT
```

The user types in the word PRINT and the name of the output file followed by a carriage return (CR)—This purpose is to obtain the audiometric analysis printout.

EMPLOYMENT OF DEAF PEOPLE

Boyce Williams, LL.D., Director, Office of Deafness and Communicative Disorders, Department of Health, Education, and Welfare, Washington, D.C.

Some background

Employment of deaf people is a topic that I address with much interest albeit uncertainty. The interest stems from my daily bread, the employment of deaf people being the goal of the vocational rehabilitation program for them. The uncertainty is more difficult to explain because as national director of vocational rehabilitation for the 7,000 or more deaf people who are rehabilitated each year it is natural to presume that I have at my finger tips a wealth of information about the jobs in which these deaf people are employed when their cases are closed as vocationally rehabilitated. With those of you who think it should be this way, I agree. Unfortunately, we are a minority.

Thirty years ago each of the 40,000 or so vocationally rehabilitated cases was reported on a form that was tabulated in Washington. Separate tabulations of the 700 to 1,000 deaf cases provided a wealth of information by which the effectiveness of the state vocational rehabilitation agencies in serving them could be estimated to the extent areas of strength and weakness could be identified. The rapid growth of the program in the intervening 30 years to the level of 350,000 cases or so annually produced by its very volume determines that the kind of detailed information that had been reported to central office was no longer possible.

We do have the instrument of program administrative reviews that are conducted in each state regularly. However, our extremely thin staff and other commitments leave little or no time for us to become involved in these reviews. Consequently, I can tell you that the state vocational rehabilitation agencies last year rehabilitated into employment around 7,000 deaf persons, but neither I nor any one else can give you meaningful nationwide information about the appropriateness of those jobs nor what they were.

This kind of information is important. It is a major element in accountability. If some of these 7,000 deaf people have superior intelligence but are operating automatic machines or poised at assembly lines, the vocational rehabilitation process has been abused. This example points to a missing link that we must find and join to our chain to reduce and finally eliminate uncertainty. Meanwhile, you educators and we vocational rehabilitation people may both benefit by sharing some basic thinking.

Role of the educator of the deaf in employment goals

In the years prior to World War II when vocational rehabilitation was a struggling, groping service, unsure of its continuity, the only large scale effective resources that attempted vocational preparation of deaf people were the special schools for the deaf. Some of them had very substantial shops featuring training in varying depths in materials, tools, and processes common to our economy. The incongruity of vocational training in these elementary level schools was perforce ignored. Many deaf people possessed of normal strength, mobility, and intelligence successfully made the transition to substantial independent employment. Many did not.

A great concern of the thirties and forties was the relatively high ratio of deaf people who were not working in the field in which they had had most of their shop experience. Because the special schools had by necessity tried to fill the void in vocational training opportunities for deaf people by establishing and maintaining shops, they were exposed to ill founded evaluations based on the standards applied to technical and vocational institutions. In the defensiveness and confusion prevailing, penetrating analysis of the true role of the elementary school for the deaf, of the industrial arts or prevocational nature of its shop work, of the physical and mental immaturity of its students whose average age of departure was less than 18 years, seldom surfaced. Without a suitable alternative and with attendance legally terminating at 21 years of age, school heads were in uncomfortable circumstances frequently but unnecessarily.

How different their collective experience may have been had they together spoken out to say, "Vocational training is not our responsibility. Our shops are necessary, important contributors to our school aim to raise deaf children to be healthy, coordinated, responsive, effective deaf adults. Any occupational spin off that they may produce is great but entirely incidental. Society can and must find an appropriate procedure for the vocational training of these people."

I agree that this is hindsight, far removed from heat of the times. Nevertheless, it is correct. The vocational rehabilitation service with all of its inconsistencies and operating imperfections has surfaced as that appropriate procedure. Educators are now free to devote their full time and energies to the tremendous challenge of producing an effective young deaf population to which an improving vocational rehabilitation service can and does provide appropriate vocational training in the best resources that the community offers.

The vocational rehabilitator asks you to concentrate on developing in deaf youth the qualities that are essential to entry, tenure, and advancement in all occupations. These are positive attitudes toward self, associates, and tasks; ability to adapt to changing circumstances; capacity to measure in all forms; good personal and work habits; awareness of the demands of employment.

The role of the vocational rehabilitator

The effectiveness of the rehabilitation worker in assisting the deaf person to achieve suitable employment is inevitably conditioned by the quality of the work that the educator has done. This is self-evident. However, the rehabilitator has important responsibilities to compensate for insufficiencies in educational experience that the deaf client may demonstrate. He has the very flexible case service authority, personal adjustment training, through which he can purchase any service the individual may need or be able to benefit by. Unfortunately, too frequently the community does not offer the kind of training or therapy that a certain deaf client may need.

As our national capability grows, more and more appropriate resources for serving deaf people materialize. For example, during the past few years a network of postsecondary training situations of college and less than college grade has emerged. More than 2,500 deaf vocational rehabilitation clients are enrolled in them. Following successful demonstration of mental health service for deaf people, in three vocational rehabilitation projects, vocational rehabilitation counselors are able to utilize such services in more than 18 States.

On a given day the State-Federal vocational rehabilitation program has more than 20,000 deaf clients in service status ranging from diagnosis and evaluation through physical restoration, adjustment training and vocational training. He provides maintenance, transportation, and counseling throughout. Placement in employment, follow up, and follow along are the terminal services for each case.

Probably most of you know that vocational rehabilitation provides some of these services free of charge to all clients and others without cost to the extent that the client cannot himself pay.

Teamwork

While the vocational rehabilitation worker is today more confident in serving deaf clients than he was 25 years ago, he still needs the expertise of the educator. Attainment of suitable employment for deaf people is a team operation involving at the very least the client, the teacher, and the rehabilitation counselor. The progress that we all have made in the past 25 years to establish and refine effective team operations in the states is impressive.

Whereas it was not uncommon in the forties for the vocational rehabilitation counselor to be uncertain as to the exact location of the school for the deaf and for the educator to be ignorant of the purpose and procedures of vocational rehabilitation and of the people involved, today many schools have vocational rehabilitation counselors on campus, many have projects for deaf persons that vocational rehabilitation has funded. Certainly, this progress has had positive impact on the employment of deaf people. It is not measurable but is very likely recognizable to all of you who have fostered this teamwork and welcomed vocational rehabilitation oriented projects to your institutions.

Mainstreaming

The rapid growth of mainstreaming has serious implications for all of us. Its effect upon the employment of deaf people is unknown in view of its short history but out of our long experience we fear the worst. Schools for the deaf may already be receiving the deaf child casualties similar to those victims of the one room day schools some years ago. Vocational rehabilitation must share your concern and lend all possible assistance to bring order and reason to the fore in each state.

As the terminal service program for deaf people, vocational rehabilitation is limited in its capacity to render deaf clients employable at levels reflecting their native abilities when the earlier experiences of the deaf persons have been inadequate or improper. Consequently, the state vocational rehabilitation service is an appropriate ally for you, for organized deaf consumers, for parents, and for others to prompt your state and local school people, who share responsibility for mainstreaming, to permit only that mainstreaming which conforms fully to existing guidelines, which is child rather than dollar oriented.

Tomorrow

Easing of the bleak economy we have experienced the past several years is evident. Unemployment should decline. Some unemployed deaf people will return to work. Our efforts on behalf of the others must be increased.

Are they unemployed for reasons other than the economic situation? If so, vocational rehabilitation has responsibility to render them employable. Vocational rehabilitation does not very often establish and maintain its own service sources. It usually secures services from ongoing community resources, some of which it has assisted in establishing such as the rehabilitation facilities at approximately 40 schools for the deaf over the country. Vocational rehabilitation alone cannot render these unemployed deaf people employable. It needs your help, an extension of the teamwork concept to provide for the training needs of the postschool deaf unemployed person.

The first step is to undertake discussion of recognized needs with a view to finding solutions that all of you together can produce. Such discussions have taken place in many states many times over the past quarter century. The results have been encouraging, even exciting in deaf leadership every step of the way. The satisfactory employment of deaf people that we all seek will be that much earlier achieved. Unemployment and that insidious underemployment cannot thrive, even survive in such a positive climate.

CREATING A LEARNING ENVIRONMENT FOR THE EXCEPTIONAL DEAF CHILD

Nita Minton, M.S., Assistant Principal, Maryland School for the Deaf, Director, Multihandicapped Unit, Columbia Campus, Columbia, Md.

> Now, this child was hurt when he was born, he falled out of the baby bed, and he become deaf and dumb. He did go to school for awhile, but the teacher said that by him not able to train—which he wasn't potty trained at the time—they couldn't take him in, so they sent him back home. Then, afer that, I don't think he had any kind of training or anybody try to teach him to talk, by using the hand signs or the mouth signs, and if he had that kind of training, he would be able to explain exactly what happened in that room. . . . Well, they got money for training young fellows who can't read and who can't talk or help themselves. They are supposed to have some kind of training from somebody.[1]

Ernest Tidyman has written a book entitled *Dummy* which describes the plight of a young deaf man accused of murder. As a child this deaf boy was labeled as "multihandicapped" and "non-educable" and, consequently, was not accepted into any of the local programs for deaf children. As a result of no formal education, he grew up with no system of communication other than pointing and using a few very crude gestures. It is frightening to think of how many deaf children with untapped potential have been and still are being excluded from programs that should assume the responsibility for educating them.

---

[1] Ernest Tidyman, *Dummy*, Bantam Books, Inc., New York, N.Y., 1974, p. 228.

Now is an exciting time to be involved in the education of deaf children. More and more educators are realizing that there is a very special population of deaf children that traditionally were thought of as "non-educable" and are now seen as children with potential that can and must be developed to its fullest. As a result, schools are setting up special programs or classes to meet the needs of exceptional deaf children.

Deaf children and their various learning abilities should be thought of in terms of following a continuum with the extremes being made up of children with absolutely no additional problems and of children with a multitude of additional severely handicapping conditions. There is no specific point along the continuum where a child on one side is considered "normal" and on the other side is considered "multihandicapped." Rather, each child presents a different learning style, requiring a variety of techniques on the part of those that set out to teach them. Some children will learn quickly no matter what teaching techniques are used. Others will learn only through very specialized techniques. It is the responsibility of every educator to set up a learning environment that will meet the needs of individual students, and that means continually seeking new and appropriate teaching procedures.

This paper is concerned not only with expressing the need for developing special educational programs, but also with suggesting techniques that have proven successful with exceptional deaf children. The paper is directed toward those students who have difficulty succeeding in "regular" programs for deaf children, yet indicate potential for success in such programs. The ideas, however, can be adapted to any group of deaf children, wherever they may fall along the continuum.

It is critical when discussing the exceptional deaf child that we concentrate not on finding a label for the additional problem(s), but on finding whatever techniques will get the child to start succeeding. Most of the children that are considered exceptional carry with them a long list of labels. Whether they have been called "hyperactive", "brain damaged", "autistic", "mentally retarded", "neurologically impaired", "emotionally disturbed", or "bad", the problem still centers around the fact that the appropriate teaching techniques have not been found and used consistently. Finding techniques that work is where we must focus our energy. This is pointed out in another passage from *Dummy*.

> Now, here is a man that has been diagnosed all of his life—he has never been really treated, he has just been diagnosed. If he had as much treatment as he had diagnosis, perhaps he wouldn't be here today, perhaps he could have gotten up on the stand and explained what did occur in that room.[2]

One of many unfortunate facts presented in the book is that, even after all the diagnoses Donald underwent, there still was no general agreement as to the young man's ability or lack of ability.

> How intelligent was Donald Lang? There was no way for Mirus to judge. The summary of reports that he had read placed Donald anywhere from imbecile to average.[3]

---

[2] Ibid., p. 226.

[3] Ibid., p. 93.

Just as Donald's files contained records listing a variety of labels, the records collected for the majority of exceptional deaf children also list such labels. The first, and often the most difficult, step before setting up a learning environment must be to forget all those labels that have been previously assigned and to begin to develop a program based only on where individual children are currently functioning. Exceptional deaf children must be thought of first as children, second as deaf children, and third as deaf children with additional learning problems.

The children that are placed in special classes or programs usually are not referred until they have managed to acquire quite a history failure—failure to do what other people want them to do and failure to be who other people want them to be. These children become "failure-oriented".

The specific needs of these children, just as those of any other children, are numerous and varied. Most important are needs such as self acceptance, acceptance by other people, independence, the desire and ability to communicate, adaptability to a variety of situations, creativity, thinking skills, self-help skills, social skills, academic skills, recreational skills, etc. An appropriate learning environment will provide opportunities that will meet the individual needs of each child placed in that environment. With this in mind, the next step is to design a "success-oriented" program for those children that are "failure-oriented".

The development of a good program is contingent upon the careful selection and training of staff. Whether the program is to be made up of one class or a group of classes, or whether it is to be a day program or a residential program, the key factor in making it successful is to find the right people to fill the necessary positions. These people must, first of all, exhibit a good attitude toward exceptional children. Such an attitude is reflected by respect for the children, acceptance of them, belief in their potential, continual seeking for their abilities rather than their disabilities, and delight in the childrens' achievements no matter how insignificant they may appear to others. Given staff members with this kind of an attitude, specific skills necessary for teaching these children can be developed through in-service training.

There are several basic skills that must be developed by educators if they are to be able to create a good learning environment for exceptional deaf children. One of these is the ability to evaluate children to find such information as individual readiness and academic levels, social needs, learning styles, interests, behaviors that facilitate learning, and behaviors that disrupt learning.

Another necessary skill is the ability to take all the information gained through evaluation and then develop a personalized as well as individualized "prescription" for each child. This "prescription" should include long-term objectives and short-term objectives, broken down into small sequential steps that lead to the achievement of those objectives. For some children the steps will have to be very small in order to assure success. For other children the steps may be larger. To develop good programs, the programmer must be able to assess needs and then establish appropriate objectives and sub-objectives.

Next, the programmer must be able to further utilize information from the evaluation in order to locate, adapt, and create motivating teaching materials and activities that will stimulate each child to work toward the achievement of the established objectives.

As a consequence of their histories of failure, exceptional deaf children usually have developed an extensive repertoire of maladaptive behaviors. In order to serve as "change agents" to bring about appropriate changes in behavior, the staff must also be trained in the principles and practical application of behavior modification. The basic principle of attending to (reinforcing) desired behaviors and ignoring undesired behaviors is an essential part of a successful learning environment. Behavior modification must be understood completely so that well planned systems providing meaningful reinforcers and following appropriate reinforcement schedules can be adapted for individual children. This approach builds in success for children, then reinforces that success.

Also essential in assuring success for individual children is the development of skills in total communication by every staff member involved with the children. Any avenue of communication—gestures, sign language, speech, speechreading, reading, writing—that gets an idea or feeling across to a child or enables a child to express his/her own ideas or feelings must be encouraged. Generally, exceptional deaf children have very poor communication skills; and, often, they indicate little desire to communicate. By reinforcing the use of any form of communication in which a child can feel comfortable and can succeed, the child will come to see the value of communication with other people. Each form of communication should be developed according to the child's potential.

Once a group of children is gathered and a good staff is selected and trained, a learning environment can be established. Staff members must use their skills to create structured classroom and dormitory programs that will assure a maximum of successful learning experiences for each child. The school's administrators must be willing to give the teachers and dormitory counselors flexibility and support as they go about creating such an environment, since it is the people dealing directly with the children who know best their individual needs.

Classroom and dormitory programs must be carefully planned by all of the staff involved in order to allow for consistency. In addition, the classroom program and the dormitory program should be coordinated in order to provide further consistency. Teachers and dormitory counselors need to plan together in an open and sharing atmosphere as they work toward creating a total and consistent learning environment.

The role of the dormitory counselors and teachers in this type of program is different from the traditional role. No longer are they thought of as a source for passing out information for children to store, but rather as persons who can manipulate the environment in such a way that children will learn from being in that environment. It is a much more exciting and challenging role.

Programs in the dormitory and the classroom should center around the selected objectives for individual children as determined by a needs assessment. Activities planned for the children cannot be limited to the dormitory and classroom, however, but must include a variety of experiences within the community. Obviously, the more opportunities the children have for new experiences, the more chances they will have to learn and to be reinforced for appropriate behaviors for a variety of situations. These experiences also increase their ability to become adaptable.

In addition to the programs offered in the dormitory and the classroom and supplemented by activities in the community, other support services are needed by exceptional deaf children. Such people as psychologists, physical therapists, occupational therapists, pediatricians, school nurses, speech therapists, audiologists, and consultants in related fields can offer tremendous back-up support in developing appropriate programs for the children. Generally, their role would be that of evaluating individual children and then advising the teachers and dormitory counselors as to how they can implement these additional services within the classroom or dormitory environment.

Another area of prime importance is the integration of exceptional deaf children with the deaf children in the "regular" program in a variety of non-competitive activities. There are so many occasions in which integrated activities are appropriate and prove to be learning situations for all of the children and all of the adults involved. Such activities tend to help everyone realize that these exceptional children are more like their peers than different from them.

Once the teachers and dormitory counselors have taken advantage of all their skills and have set up a program based on personalized and individualized objectives, and have arranged activities both in the school and in the community, and have included recommended support services, and have provided a variety of integrated activities with other deaf children (all within an atmosphere that provides positive reinforcement and encourages communication), then they can feel that they have created a learning environment for exceptional deaf children!

One question comes to mind, however. What happens when the children leave that beautiful learning environment?

Those people responsible for establishing an environment for exceptional deaf children need to extend their services in order to help manipulate the rest of the environment in which the children move.

One part of the environment that is easily overlooked, yet which is part of the children's daily experience, deals with all the other people at school who are not directly involved with the children, but who come in contact with the children frequently. This includes educational staff of the other departments at the school and service personnel such as maintenance people, secretaries, kitchen staff, etc. It is in the best interest of the children to provide some in-service training for all of the school staff. This training should offer an explanation of the type of program designed for the children and should suggest ways that these people can provide support for the program. By enlisting the support of all people at the school, the learning enviroment that has been so carefully developed can be maintained throughout the school.

A separate part of the child's total environment, and such a critical part, is the child's home. It is so important that the same principles used in creating a learning environment at school be carried over and used in the home. Most parents of exceptional deaf children are willing to adjust their home environments to meet the needs of their children, but they need suggestions. A program should be set up for parents to offer them counseling, training in behavior modification principles and its application in the home, training in sign language, regular communication between the dormitory and the classroom, and opportunity for observation and involvement with the child in the dormitory and the classroom. A program offering these and other services would help the parents to know better how to work with their children and to maintain an environment consistent with the school environment.

Obviously, creating a learning environment for exceptional deaf children is not an easy task. It is a tremendous challenge. The "pay off" comes, however, when you see those "non-educable" children happily learning in the environment you worked so hard to create!

REFERENCE

Ernest Tidyman, *Dummy*, Bantam Books, Inc., New York, New York, 1974

SCHOOL LEAVERS BUT NOT SCHOOL ACHIEVERS

Frank Withrow, Ph. D., Special Assistant for Special Studies to the Deputy Commissioner, Bureau of Education for the Handicapped, Department of Health, Education, and Welfare, Washington, D.C.

Deaf children seek the same rewards in life that all children look for, and deaf adults strive for their rightful place in American society. Like all first class citizens of America they feel they are entitled to the right to pursue life, liberty and happiness. To understand where these opportunities fall short of their promise we must look at what factors enable us to achieve our desired goals. What is the role of the school in opening the door to the self actualization of achievement by every deaf individual?

My assumption is that the school is only one of the systems in the nation which allows for the child to have opportunities for self development. It is not the only, but for children it is one of the most important and universal roads to participation in the rewards of this society. For the deaf child the school may be the single most important avenue for self realization and achievement. Therefore, under achievement may be a greater handicap to the deaf child than to other children. The school in most instances not only opens the world of learning to the deaf child, it opens the world of communications upon which most vicarious learning takes place.

One could logically ask what is the mission of the school for the deaf child. It is only after we understand the mission of education that we can understand the discrepencies in the system which we call underachievement.

If we think of the mission of the school as providing the opportunity for self actualization of each individual then we can clearly set goals of achievement in the four major areas of life which are:

(1) The world of self . . .
(2) The world of work . . .
(3) The world of recreation and leisure time activities . . .; and
(4) The world of community responsibility . . .

Achievement in the world of self . . .

Each child has the right to grow in his own self confidence, to understand his own worth as a human being . . . to feel that he is of use to the society in which he lives . . . to feel that he is valued as a person . . . to know thyself and to feel comfortable with that knowledge. Failure or under achievement in knowing oneself closes the doors of interaction with the wide world of others. Schools for the deaf in seeking the world of academia frequently have overlooked the world of self, consequently our graduates have failed to learn to know, to like, and to love their ownself.

If the school does not help the child to know who he is and that he is valued, then the child will have many doors of growth barred to him. Underachievement in understanding human values can foreclose the full growth of the spirit which molds strong people who can express their own values within the group even when those values are opposite from the majority of their peers.

The school has often spoken of objectives in this area of life, but it has seldom been able to marshall resources which have enabled curriculums to be established which fostered humanism. Ten years ago the Withrow and Lisensky Curriculum: Sex Education in Residential Schools for the Deaf, Illinois School for the Deaf, USOE research contract did enable some programs to move towards more humanistic and open educational environments. Environments which were less restrictive in that the opened up communications between all elements of the school's personnel and the children within the school. The Jr. NAD and other activities have also offered young deaf people the opportunity to understand, grow up knowing that they are loved and valued for themselves and not for the mask which society arbitrarily honors. Without achievement of self understanding the deaf child will stumble rather than march forward toward his life's goals.

We are not only achieving some success in the placement of new ideologies into the school curricula which emphasize the value of the deaf child, but we are as a group moving toward a better utilization of deaf adults. I believe that the field is slowly turning toward a dual and equal culture of deaf and hearing societies which respects and values mutual goals.

There will still be underachievement in the world of self as long as deaf people are treated as second class citizens, patronized and manipulated as a culture set apart and protected by big brother.

Achievement in the world of self means for the deaf individual a feeling of comfort with his ownself, the ability to feel pride in the world of the deaf, and an equal opportunity to participate in the larger society composed of other minority groups not as a melting pot of conformity, but as a blend of the best each individual has to offer.

There are indications of achievement in the world of self through the increased opportunities for deaf adults to compete within the world of work. Doors are today being opened through affirmative action practices. Eventually parity will be reached with the hearing world and redress will no longer be needed. At that time no one will bear the scars of discrimination in any walk of life. At such a time there will be an easier exchange of ideas and understanding among all people within our society.

The world of work . . .

The educational management system of our schools have been very closely tied to the world of work. It is through the schools that our society has provided the people who run our industries, manage our resources, expand our economy. In America, too often we have valued one's use in life solely on the contribution he makes through his work life. If he has an exceptional talent which entertains us, makes our lives easier or amasses great financial rewards we value him and feel that he has achieved a worthy purpose.

Failure to live up to these standards of society usually means underachievement on the part of the individual. Achievement in modern American society frequently is tied to the number of years spent in school. Life time earnings have clearly indicated that the more school one attends the greater the likelihood of success within a given field. Class mobility in America has meant more school. But has it meant the same thing for the deaf person as it has for the hearing person? Statistics show us that this is true only in a relative sense. Deaf people who are compared with other deaf people do follow the trend of more school equals more pay. On the other hand deaf people when compared with hearing persons who have equal schooling have not shown comparable increases.

One answer to this is that school years of deaf people are not comparable to school years for hearing people. Another interpretation is underachievement in the world of work. That is, that the deaf person based upon his knowledge, skill and training does not achieve as expected in the world of work. What are the barriers which prevent the deaf person from achieving as expected in the world of work? Unfortunately, the most obvious and mose prevalent problem is prejudice with respect to what the hearing world thinks the deaf person can achieve. There is still discrimination even in those parts of our society which should be most sympathetic toward the handicapped worker. I wish that I could report that the Federal Government was a completely unbiased employer. I can't . . . but I can report that life is better in this respect than it was a few years ago, even better than it was last year; but I still cannot tell you that even agencies such as the Bureau of Education for the Handicapped or the Office of Deafness and Communication Disorders are free of biases against hiring handicapped people. We are a lot better off than a few years ago. The interpreter job that BEH created in the Division of Educational Services, Media Services and Captioned Films Branch was the first civil service classification of interpreter and that took place less than five years ago. This was a step toward establishing the concept that deaf workers have a right to a full time interpreter, on a regular Civil Service payroll, so that they might have the opportunity to participate in the management activities required of their jobs. We now need to provide guidelines as to the number of deaf professionals one interpreter can reasonably work with. We also have clearly established in the Federal Government that hearing impaired people are entitled to telecommunication devices if this will enhance their work potentials. Consequently, TTYs and or amplified phones are available for all such workers.

However, within the Federal Government deaf workers are frequently assigned to work areas which are associated with the services offered to deaf clients. Freedom of employment or equal employment opportunities will be achieved when a deaf individual has an equal chance to be employed as a specialist to work in the gifted program if he is qualified in that area without consideration of his deafness. Or when a deaf person is selected for a position in telecommunications because of his or her skills in telecommunications without respect to his deafness. I believe the Federal Government is slowly moving forward in its own house in this matter. The affirmative action program in the Vocational Rehabilitation Act of 1973 opens up a new world within the Federal Government and within companies that do at least $2,500 worth of business with the Federal Government. There is one word of gloom with respect to this action because unlike other affirmative action programs in civil rights and women's rights movements Congress felt compelled to include in this act the words "qualified handicapped employee". This gives almost any employer an out since he can build real and arbitrary restrictions which can act to exclude handicapped workers. Nonetheless it is a giant step forward.

The deaf have another great problem with respect to underachievement in employment. It has to do with the old saying of "its not what you know but who you know" that determines how you will move up the ladder whether you are in a trade or in a business office. Deaf workers have sometimes been hampered in that they have been social isolates within the work force. The employer and the fellow employees may have thought that it was a favor of them to just let the deaf person be hired and that the deaf person should be grateful for the chance to work. The old slogan of the President's Committee on Employment of the Handicapped which stated that the handicapped employee was a better employee . . . he missed less days of work because of sickness . . . he didn't change jobs as often . . . and he also didn't demand equal wages for equal work are part of the syndrome that I am talking about. The deaf worker has the same right as his fellow worker to make mistakes. He must, of course, take the consequences. Supervisors will accept certain mistakes as learning experiences if they have a good social rapport with the worker. Social rapport is obtained through communications and social discourse by the worker and the supervisor. Deaf people have frequently fallen far short of achieving even minimum levels of acceptance in this area, consequently they have remained grossly underemployed.

Self actualization in the world of work means that people will find their work satisfying. They will see that their work is of value and of use to the society as well as a means for financial reward. I hope to see the day when our society in America does not judge a man's value on his financial worth or his position of power. There is no excuse in America today for people to be engaged in work that is not self fulfilling to them. We have the resources to eliminate 90% of the undesirable jobs required by our society.

The world of leisure time and recreation . . .

Dr. Ely in his keynote address spoke of life long learning as some of the new catch words of our day. I agree with him that these catch words are currently in vogue. I also think that we are emerging as a learning society and that deaf people must be a part of that learning society if they are to achieve. A deaf person who does not continue to grow in knowledge and use the community resources available for such growth cannot expect to meet the challenges of modern society. It matters very little whether he is studying advance statistics or gourmet cooking. The deaf person who will remain alive and vital in this society just like his hearing counterpart must continue to grow and learn in new areas which interest him. In this instance I am reminded of a seventy year old deaf couple that I know. After a long career in the postal service the husband retired. I remember that a few years ago my wife and I were in the city in which they lived and we thought we might drop by and pay the "old folk" a visit. As usual, our friends were delightful hosts, but the visit was cut short since they were both off to evening school. They were taking floral arrangements. That afternoon I learned more about floral arranging than I ever wanted to ask, but . . . the exciting part about this event was that these older deaf people were still alive and eagerly learning about something of personal interest to them. It is unlikely that they were ever going to put their knowledge to use in a way that they would obtain financial gain from it, but they were of great use to others through the pleasure they were able to bring to other people who were their friends through the knowledge gained at the floral arrangement classes.

For those of us who are not at the retirement age there are plenty of leisure and recreational activities which we need to be a part of. As a school we need to prepare our children through opportunities in art, dance, drama, and physical education for life time activities in these areas. The drama and dance groups which have been in part stimulated by the National Theatre of the Deaf and the fine work in these areas which both Gallaudet and NTID are now offering has stimulated a nationwide interest in arts for the deaf. If deaf people are to be able to reach their full potential opportunities for development and continued growth in these areas is essential. Deaf people have achieved in sports reasonable well, however, I believe that only recently has there been an opportunity for their self expression through the performing arts. One of the most exciting examples of achievement in this area was this year's play put on by the Model Secondary School for the Deaf. It was a great play for several reasons.

For my part it was a "mainstream" play. Live music and singing was synchronized with the acting and signing of the deaf actors and actresses. The experience in putting on the play with a group of hearing young people brought these young people together in a unique manner. Both groups were dependent upon the other for the success of the play, both groups grew in human understanding. . . . The play, which was "Oliver" was one of the most enjoyable evenings that I have spent at the theater in several years.

Without the opportunity for this type of growth deaf people are under used . . . and they are underachieving in one of the major areas of life.

The world of civic responsibility . . .

Perhaps, the most neglected area of development of deaf people is in the area of civic responsibility. Few, if any, deaf people have run for public office. . . . Few, if any, deaf people are on the public boards of industry or government . . . few, if any, deaf people are heads of local or national unions. Some deaf people have gone to work in religious groups, however, here their work has been predominately directed towards other deaf people.

There are encouraging signs that deaf people are organizing to form groups which collectively work for their self interest. The growth and activities of the NAD and ODAS are examples of leadership which are rapidly providing a strong force within American society for not only the betterment of deaf people but I hope ultimately all people. Activities such as the leadership program developed by the Jr. NAD and the student governments of Gallaudet and NTID are also signs of the deaf community organizing towards better achievement in the areas of civil responsibility.

I was pleased to hear that the annual Deaf Boy Scout Camporee was held in North Carolina this year. More than ten years ago Zeke Beranick and I began those camporees in New Salem, Illinois. Our hope was that deaf Boy Scouts would organize and lead the activities of these national camporees. Our hopes were more than fulfilled because hundreds of deaf Boy Scouts over the years have worked in leadership roles to organize and conduct this historical event. We need more opportunities for deaf youth to experience these leadership roles.

In the Bureau of Education for the Handicapped we have the Gifted and Talented program assigned to us. No longer do we think of gifted as being solely the high achieving academic student. We are seeking young people who have leadership qualities and looking at ways to identify such people. One interesting side line of this effort is that leadership can be learned in many places. As a matter of fact small programs may offer a more fertile grounds for leadership development than very large institutions. Small college student bodies can offer leadership opportunities whereas the very large 25,000 or 40,000 student body governments are so large that all efforts are swallowed up by the system. This says to me that schools for the deaf if they afford real opportunities for students to affect change through their organizations may be preparing young deaf people to become a part of the community leadership when they are older. Serving as the president of a Jr. NAD chapter or being a scout leader or class president may be the foundation upon which a deaf person will be elected to the board of aldermen or state senate or other public offices of trust.

I think it is possible that in my life time I will see a deaf person elected to public office. They will not run as a minority candidate, but will run because they can serve the interest of all people.

Deaf people like others in our society have underachieved in one or all of these areas. Many of us have left school without realizing success in any of these areas. We are never too old to learn. Deaf people are experiencing a new opportunity to experience growth in all of these areas. There are many signs which make me feel that there is a greater understanding and public awareness about deafness today than there has been in the past. There is great promise that we are truly evolving a society which is a confederation of equally acceptable minorities.

For each of us in this room the FUTURE IS NOW. . . . Tomorrow is too late. . . . Let us get about our work in a manner which enhances the possibilities for deaf people to be full participating members of American society. . . .

CONCEPT OF A WORK STUDY PROGRAM FOR HEARING IMPAIRED HIGH SCHOOL STUDENTS

Don G. Pettingill, Coordinator of Off-Campus Study, Model Secondary School for the Deaf, Washington, D.C.

A major problem faced by deaf youth leaving school to enter the world of work is that they are not ready. Often they have little understanding of what is involved in being an employee, what competing with hearing peers in a job setting means, and what realistic expectations of income they should entertain.

One approach to the problem is a "work study" program. What follows is a description of one such program which was developed by the author as a result of a long background in business, as a vocational rehabilitation specialist in three states, and finally as a work study specialist in the Model Secondary School for the Deaf. It is offered as an example or model which other schools may find useful in preparing high school age deaf youth for the world of work.

Philosophy

The goal of the program is to help students accept their deafness and learn to live and work in the complicated 20th century world. It is primarily designed to prepare students to adequately cope with real world situations with the least amount of trouble and frustration especially during the transition from school and family life to independent living.

Deaf students may or may not know what occupations their parents have, without realizing what duties are required and what functions are performed. Most students are unaware of the problems which can occur during employment, with the job itself, or with the employer or other employees. They may also be unaware of such things as family money problems and other day-to-day aspects of living.

Orientation to work study

A good work study program should familiarize students with these problems and issues during the students' tenure in high school. An 18 weeks values clarification course, Orientation to Work Study, and a five-step program to provide students with exposure to various work stations, are the gist of this paper. The values clarification course, which each student should complete during his first year in high school, includes discussion sessions on such topics as good work habits, proper attitudes, and the responsibilities and requirements expected and demanded by employers.

Summary of the 18-week course

The student will be briefed on the purposes and functions of the work study program, and what he may expect from it during his high school years. He will be familiarized with questions asked on job application forms by filling out a simple form and sharing the information about himself with instructor and class in group discussions. A briefing on the Social Security system and how to apply for a Social Security number will follow. Through discussion with his parents, he will be expected to learn about at least five different duties or functions of their jobs. Then he will learn what it means to be a member of a minority group and the various positive ways of overcoming his handicap.

The importance of acceptable on-the-job behavior and ethics to job success and security will be stressed. The student will learn the relevance of earning high marks on the student trainee evaluation forms to be submitted by his employers when he begins his work station experiences. The student will also be briefed on the realities he will actually face after graduation, when he suddenly finds himself on his own. Further, he will be offered some practice in filling out the more complicated job entry forms such as applications for tax exemptions, insurance plans, and savings plans, as well as several different types of job application forms. Finally, he will learn the more dependable methods of locating job leads, and will participate in some practice sessions on proper job interview behavior.

Occupation information

Since deaf students are often less knowledgeable about the variety of employment opportunities that exist, the total program attempts to provide them with an overview of occupations available in the industrial, business, and professional communities. Films, videotape sequences, lectures by skilled craftsmen and technicians (preferably deaf), field trips to selected local industrial plants and training centers are all part of the program.

Five steps (levels) of work stations

Following is a description of the concept of five cumulative types of work stations. It is hoped that all students will experience five or six different work situations by the time they are graduated, to give them the widest possible range of work exposures during their latter years in high school.

Descriptions of the five types (levels) of work stations, and the rationales for each follow:

1. On-campus stations.—Work stations on the school campus in various departments such as the lunchroom, media, library, residence halls, etc.

Rationale: Students learn procedures for filling out simple job application forms. In addition, they learn the importance of punctuality, dependability, initiative, maturity, and motivation. This phase provides a chance for them to put into practice what they learn in the values clarification classes. It also gives the work study staff an opportunity to observe students first hand, and to provide on-going counseling and guidance toward proper attitudes and behavior.

2. Semi-sheltered off-campus stations.—This level consists of work stations off the school campus in organizations and businesses familiar with the deaf as well as with total communication.

Rationale: To provide students with meaningful real-life work experiences in which they are treated as regular employees under close supervision of adults who use total communication. This enhances the learning and understanding of good work habits and desirable qualities right on the job.

3. Unstructured community stations.—Work stations in regular business and government agencies such as insurance firms, carpet laying businesses, small appliance and motor repair companies, heavy equipment operation and maintenance companies, veterinary hospitals, and various government agencies such as city, county, state and federal offices are involved at this level.

Rationale: To provide students with work experience and exposure to the regular business world and its pressures and demands. The work study staff, school counselors, and teachers receive valuable feedback on students' maturity, strengths, and weaknesses from the viewpoint of the community at large, enabling the school to provide needed reinforcement in any given area.

4. Specialized on-the-job training stations.—Similar to level 3 above.

Rationale: If a student decides a certain occupation is what he wants to pursue, an attempt is made to place him in an appropriate station. At this level, vocational training programs in other community schools or training centers are also utilized where possible.

5. Independent work experience.—This is the final step which provides both the school and the student with a realistic opportunity to measure growth, progress, and readiness to enter postsecondary education, training, or mainstream employment upon graduation.

Rationale: This level is utilized if a student wishes to work part-time during his final or even his next-to-last year in school, and he has enough previous exposure and experience under the work study programs to have demonstrated his maturity.

The student "goes it alone" just as though he were in the real labor market full time. He finds his own job leads and brings them to the work study specialist for discussion and analysis. An interview with a prospective employer is arranged, and the employer briefed. However, in most cases, the student goes to the interview by himself. Whether he gets the job or not, follow-up with the employer is pursued to determine how well student performs, and how much help, and where, he needs in further training, etc.

In other words, this level is designed to detect residual weaknesses in a student so they may be corrected while he is still with the school.

Most students work an average of one day a week during the last two or three years of high school. In "on-campus" stations, two or three hours a week is the maximum. During the summer months qualified students may work full time.

Conclusions

The Off-Campus Study Program is for all students, whatever their post-graduation plans are. It is important to a student to have had the opportunity to sample a variety of jobs and to have enriched his experience and knowledge of the working world, whether he is planning to go on to college or technical school, or to face the world of work immediately after high school. Students not only become familiar with real work situations, but the program enables them to interact with the hearing world and gain exposure to both the good and bad aspects of everyday life. To save them having to face these problems alone after they leave high school, the school helps the students to understand and cope with difficulties they may encounter.

In sum, a good, well designed, well staffed work study program helps students grow emotionally through a program which combines training, counseling, and actual employment situations.

Thus, a "preventive" program of this kind, which exposes students to problems encountered in the outside world while they still are in school, develops them into more mature individuals and should reduce to a minimum the need to spend taxpayers' funds on personal adjustment training, counseling and rehabilitation normally needed for students who suddenly emerge from their sheltered institutional world to face the problems connected with earning a living in the real world outside. Students who choose to go on to college can also profit from this program by gaining a more adult view of their duties and responsibilities.

Wednesday, June 25, 1975

TOPIC: The Learner's Teacher Learns

ROLE OF THE SPECIALIZED OFFICE FOR THE DEAF AND HARD OF HEARING

Robert E. Stepp, Ph. D., Director, Special Office for Deaf and Hard of Hearing, University of Nebraska, Lincoln, Nebr.

On September 1, 1974 the Bureau of Education for the Handicapped launched a new media network called the Learning Resource System. Planning for this program began the previous year and was formalized by the issuance of RFP 74–8. This Request for Proposal established 13 regions in the United States and Territories to serve the handicapped in the area of educational media and technology.

In order to achieve the fullest and most extensive coverage, the Bureau established a new organization, the Learning Resource Branch, with Elwood Bland as Branch Chief. The network includes the National Center on Educational Media and Materials for the Handicapped (NCEMMH) located on the campus of Ohio State University; thirteen Regional Resource Centers (RRCs) serving as diagnostic agencies; thirteen regional Area Learning Resource Centers (ALRCs) serving State, Metropolitan, and local Materials Centers; and four Specialized Offices, supporting the programs of the ALRCs.

The four Specialized Offices are:

S–1—Specialized Office for the Visually Impaired American Printing House for the Blind—Louisville, Kentucky

S–2—Specialized Office for the Deaf and Hard of Hearing, University of Nebraska—Lincoln

S–3—Specialized Office for Other Handicapping Conditions, University of Wisconsin—Madison

S–4—Specialized Office for Materials Depository, University of Indiana—Bloomington

S–1, S–2, and S–3 have, as their major effort, the responsibility for searching for instructional materials that are appropriate and suitable to use in teaching handicapped students. The function of S–2 specifically is to search for instructional materials to teach the deaf and hard of hearing.

This search includes productions from government sources, national organizations, the National Audiovisual Center, Gallaudet College, National Technical Institute for the Deaf, other schools and colleges, individual teachers of the deaf, commercial companies, and other agencies that serve the deaf. S–2 is conducting an in-depth search for these extant materials.

The master plan for this network is an ALRC/SO/NCEMMH workscope developed by Dr. Paul Andereck, BEH. This workscope defines the tasks of the National Center. Area Learning Resource Centers, and the S Offices. The tasks are carefully delineated so that there is a united program without duplication of effort or services. The workscope encompasses six major areas:

1. State Program Development
2. Instructional Materials Development
3. Media, Materials and Educational Technology Training
4. Media and Materials Information System
5. Materials Distribution System
6. Project Administration

The S Offices focus on seven tasks, or workscope elements, under two of these major areas:

2. Instructional Materials Development
4. Media and Materials Information System

Four of our tasks are in Area 2, adapting, developing, and field testing instructional materials, while three tasks are in Area 4, feeding into the National Instructional Materials Information System (NIMIS), a computer search and retrieval program. And of course, Area 6, Project Administration, is our eighth workscope task.

The seven basic task items are:

2C Locate usable materials which exist and fulfill identified needs

This mandate refers to a search for suitable materials for teaching the deaf and particularly for materials that serve specified needs in the education of hearing impaired students.

BEH will soon undertake a national needs assessment to determine instructional areas for which additional educational media are desirable. This survey will give guidance and direction to S–2 search areas.

2D Adapt adaptable materials which can be made to fit identified needs

In our search of extant materials, S–2 may find excellent materials which, with modification, would be useful in teaching the deaf. In those cases, S–2 would make judgments about the value of these materials and the extent of adaptation required. Another decision concerns the priority based on needs determined by the National Survey.

2E Develop needed materials which are unavailable, unadaptable, and unattractive to commercial developers

In the process of evaluating materials and entering this information in NIMIS, the staff of S–2 will discover curriculum areas where limited (or no) instructional materials exist. In these cases, if the national assessment confirms needs, S–2 may produce the required materials. This outcome is one of the bonus features of the network. As the search is conducted, it will become obvious that certain areas are void of materials or at least that suitable materials are not available. All of these materials would be produced in consultations with educators of the deaf.

2F Field test newly developed extant materials for effect on learner-target

All newly developed materials, whether they be adapted in part or produced completely, will be field tested in schools for the deaf. S–2 has a subcontract with Project LIFE at Gallaudet College to conduct the field tests. For several years Project LIFE has had a field test network comprised of more than fifty (50) schools. Your school may already be involved in this program. If so, we are grateful to you; if not, you may want to write to Dr. Glenn Pfau, Project LIFE, Gallaudet College, and inquire as to the procedures for becoming a test site. Project LIFE is a very successful instructional program and we are happy to be affiliated with it in this field test network.

The results of these tests are included in our quarterly reports and serve as guidelines to our future productions. One of our major concerns is that through this field testing process we can learn better ways to design instructional materials for the deaf.

4A Identify systems entries, classify and recommend usage of instructional materials for handicapped children

For FY1976 this will primarily be a planning and coordinating workscope element for the S Offices. Under 4A, the standard criteria for evaluating instructional materials will be expanded, refined, and improved. This involves the "fine-tuning" of the procedures and criteria for identifying, classifying and recommending usage of instructional materials for the handicapped. In addition, the S-2 will cooperate, and coordinate all efforts, with NCEMMH on the NIMIS entry requirements for abstracts. These two major functions will also involve a continual interface with the other S Offices/ALRCs to assure that evaluation criteria and abstract procedures are consistent for the entire LRC network.

4B Evaluate materials by standard criteria

This workscope element represents the time spent by S-2 professional staff in the assessment of instructional materials according to S Office standard evaluation criteria. In evaluation, the materials are identified, classified, and recommended for usage. Currently, the S-2 is using an interim set of evaluation criteria developed during the first operational year. However, as indicated earlier in 4A, these interim criteria will be expanded, refined, and improved.

4C Describe materials and encode descriptions for data base entry

This is the process of preparing the actual abstracts. It involves the logistics of getting the materials from the information specialist to the abstractors at the right time; writing and editing the abstracts; typing the abstracts; and submitting the completed abstracts to NCEMMH for NIMIS entry. NIMIS, the National Instructional Materials Information System, is located on the Ohio State University campus and uses its computer service. The specific program is the Ohio College Library Center (OCLC). The assembled information is programmed into the computer for later retrieval by teachers of the deaf through their Area Learning Resource Center. By selecting the proper descriptors and feeding these identifiers to the computer, teachers will receive a printout recommending specific instructional materials to assist the teacher in resolving the student's learning problem. Request for this service should be made to your Area Learning Resource Center.

In terms of S-2 activity, the actual materials are borrowed from local sources and contributing companies. When these materials are received, they are processed into the abstract system. First, the thousands of materials received are "logged in" for identification and accountability purposes. The material goes next to the information specialist who records the basic information about these materials on the proper NIMIS forms. After the specific data has been recorded, the material goes to the abstractor who previews the materials and writes a paragraph describing and evaluating the suitability of the material for teaching the deaf. The prepared report goes next to the editor who checks the review for style, consistency, and uniformity. The final check is by the coordinator of the abstracting program.

The completed form is mailed to NCEMMH where it is reviewed before entering into the computer. Concurrent with the entry into NIMIS, the instructional item is purchased for the library of S-2—Specialized Office for Materials Depository. These materials may be borrowed from S-2. It is the intent of the program that all materials entered into the computer shall be available from S-4. This plan provides the means whereby each school and/or teacher can preview and test the materials with handicapped children before purchasing or adding the materials to their Learning Resource Center.

S-2 is committed to prepare 5,000 abstracts per year. The other S Offices are doing similar work. The immediate goal is 15,000 abstracts in the computer by August 31, 1975.

6 *Project administration*

Area 6, Project Administration, includes management of the project and also provides for expenses or operational costs that should not be charged to other workscope items. Accountability for the entire project is an administrative function. Procedures have been designed which permit cost-accounting for each element of the workscope for which S-2 is responsible. Costs are computed for search and retrieval, adaptation, production, abstracting, and field testing.

To insure accountability and to simplify operation, the S-2 Office is organized into three divisions: (1) Search and Retrieval, coordinated by Dr. George Propp, an experienced educator of the deaf who is also Assistant Director of the Project; (2) Design and Production, coordinated by Robert La Gow, a talented producer, who has designed and produced numerous materials for the deaf; and (3) Accountability and Evaluation, coordinated by Ronald Kelly, a researcher and evaluator with several years of experience in the education of the deaf. Each of the above divisions has a basic staff. This consists of the coordinator, a certified teacher of the deaf, a qualified media specialist, and a secretary.

Each year the S-2 Office will single out a content area which will receive special emphasis in our search for materials. This coming year (1975–1976) the areas stressed will be career education. The basic staff for this search activity will be augmented by hiring additional abstractors. Our goal will again be 5,000 entries in NIMIS with the major input being information about career educational materials.

You can help us achieve our workscope goals. One way is to send us information about the excellent materials that you are using in your own teaching. Let us know about the outstanding materials that your teachers have made locally, so that these materials may be shared with other teachers. Give us ideas about the new materials that you want produced. What are your most urgent needs?

The University of Nebraska—Lincoln is happy to have been selected as the site of the S-2 Office for the Learning Resource System. We are working every day to assist in the education of deaf students. Our present goal is to organize a data bank which will offer educators a broad selection of really appropriate instructional materials for use in teaching the deaf. This is a "mustering of resources" for the hearing impaired.

CREATIVE ARTS: A KEYSTONE OF DEVELOPMENT

Carol Trigg, Creative Arts Teacher, Dallas County Wide Day Schoool
for the Deaf, Dallas, Tex.

We are products of a system that required us to learn by imitation—however useful we could not always sense or evaluate for ourselves. Achievement was measured by the ability to imitate skills that were not real to us.

Give us work which we learn by doing; by creating ourselves real images of the world and each other. We will retain so much more because it is our own. Let us hold on to our imaginations, our self-awareness, and pride in our own strengths and abilities. Give us something that is not imitative—where we as individuals can excel and create—where our minds are constantly enlarged through their full potential—where we as humans cannot fail. (*1*)

The above passage was voiced by Bernard Bragg, a very learned and talented actor in the National Theatre of the Deaf. From his plea, there can be defined a foundation for the development of a creative or related arts program. The goals of such a program which was established in the Dallas Independent School District three years ago were to stimulate creative thought, encourage independence and individuality, provide a non-verbal means of communication, and aid the child in the formulation of a positive self concept.

The learning environment experienced by these children is conducive to all forms of communication with self and others, not just the verbally oriented exchanges which are so predominant in traditional educational programs. The arts can help to dissolve the communication barrier and free the child to express and explore his cognitive and affective being. The arts may also serve as an avenue for symbolic expression which allows the child to share his feelings with others. Creative dramatics, movement-dance, rhythm-music, and the visual arts facilitate thought and self expression.

The program is success oriented and as such, the fear of failure is removed. Each child has something of himself to share and he is rewarded and encouraged for creative expression.

The 1973 Annual Report of the Advisory Committee on the Education of the Deaf acknowledges the need for the development of creative arts experiences for the hearing impaired population. In addition to the value of these experiences which relate to the academic curriculum, the values of the performing arts for the deaf have been recognized. In a statement of priorities to be addressed by educators, the committee suggested that "the National Foundation on the Arts and the Humanities support the development of a center for performing and graphic arts for the handicapped." (*2*)

In order to achieve the goals inherent in such a program, there should be careful study of three major areas. First, cognition: What is thought? How does "thinking" relate to academic curricula? What are some ways in which the child's thoughts can be communicated? The second point to be explored and understood is the meaning of creativity. Can creativity be developed? Is there a difference between the creative processes of the deaf and of the hearing? And the third and most crucial concern would be the awareness of the factors relating to the development of the child's self-concept.

CREATIVE ARTS—COGNITION

As educators we should provide experiences allowing our students to "show off their minds."*(3)* Our basic concern should be in teaching children how to develop their cognitive abilities. Furth believes the role of the school be to "encourage the initiative of the thinking, feeling self and to subordinate all activities to this primary goal."*(4)* Voyatt concurs with Furth in stressing the predominance of thinking activities and experiences as the basic process of cognitive development.*(5)*

The deaf child's "intellectual poverty" is partially attributed to our current educational trends.*(6)* "Research has demonstrated remarkable similarities in overall intellectual development between deaf children (who have no language) and hearing children from disadvantaged social or physical environments (who have language)."(7) Both groups of children suffer from the same handicap in that neither their home nor school environment has successfully encouraged the development of their cognitive abilities. Once the child is intellectually motivated and alive, he will spontaneously search for ways of symbolizing and communicating.

Encounters with the arts can be highly motivating experiences for the child and also challenge his thinking and problem solving abilities. Problems requiring independent thinking skills can be presented through rhythm sequences, movement, creative dramatics, and visual art forms. Academic areas in the curriculum may be enriched through arts experiences.

Through the creative arts media, the child may be able to share both cognitive and affective development that he is unable to express through a verbal form. From these experiences the teacher can then work to insure the appropriate language concepts.

CREATIVE ARTS—CREATIVITY

Guilford and Torrance illustrate through research that creative skills, like intellectual abilities, are trainable. Torrance further stresses the early development of the creative processes and believes if stifled early in life it may become only an imitative ability. *(8, 9)* A graduate research study recently performed at Southern Methodist University lends further support to Torrance's contention regarding creative development. The Torrance creativity test, "Thinking Creatively With Pictures," was administered to a group of hearing and deaf five-year-olds in Dallas Independent School District with results showing no significant difference in the measurement of creativity. However, utilizing the same test with eleven-year-old hearing and deaf students

Rogers found the hearing sample performed significantly higher (at the 0.01 level) than the deaf in all four areas: fluency, flexibility, originality, and elaboration.

It is also the author's contention that creativity must be developed, or its growth will be retarded. In all the many educational surroundings, for both hearing and deaf children, creativity is thwarted by the relentless pursuit of perfection to meet adult standards. Too often, this is typified by the teacher who dispenses ditto sheets with the instruction to "color within the lines," or the tracing, cutting and coloring of Thanksgiving turkeys, Santa Claus, Valentines, Easter rabbits, and jack-o-lanterns. It is a miracle that the child's creativity endures after he has been positively reinforced to conceal his own creativity.

As educators, we need to challenge our students to use their natural creative talents and express this very personal aspect of their personality. Creativity is often thought of in conjunction with the arts but should be integrated into academic areas as well. As professionals, we are responsible for the cultivation or extinction of the creative processes.

CREATIVE ARTS—SELF CONCEPT

The hearing impaired child has been documented to have more problems than the hearing child in the development of a positive self concept. His lack of receptive and expressive language impedes the growth of the child's ego.(*10*) Being unable to perceive his own voice or to experience essential perceptions from others, important components of his internal life are denied.(*11*).

Another consequential problem for the deaf adolescent was documented in Mulholland's doctoral dissertation. Her research of data indicates that neither parent nor teacher could effectively perceive the adolescents' self professed concerns. This incongruence documents not only the inability of the adolescent to reflect his own ego but also the failure of parents and teachers to recognize the youths' affective needs.

Research studies have demonstrated the effect of teacher attitudes as they relate to the student's positive or negative self image.(*12*) Through the related arts the teacher can assist the child in the development of an expressive medium as a complement to his verbal language. Through the arts media he can disclose his affective needs that may have no verbal form of expression. Emotions can be expressed through the arts to alleviate the frequently reported feelings of isolation.

A related arts program can also provide the opportunity to give the child positive reinforcement to build his self esteem. Within the success oriented program, the child is rewarded by teacher and peers for his self expression through the arts. The child cannot fail. Success achieved according to standards set by the child within his own capacity leads to the building of his own confidence from within.(*13*) Each small personal success brings the child closer to a healthier self concept and belief in his own creative and problem solving abilities.

CONCLUSION

The related arts program which has evolved in the Dallas Independent School District is primarily concerned with the development of an environment conducive to creativity, stimulating to the thought processes, responsive to all forms of communication, and supportive of the child's ego development. The media utilized are the visual arts, creative dramatics, rhythms-music, and movement-dance.

The visual arts include two and three dimensional art forms. Body painting, junk sculptures, leather crafts, jewelry design, candle making, sand paintings and wood sculptures are some of the child oriented art forms.

In creative dramatics, improvisational situations and plays are created for individual expression, problem solving situation, communication of feelings and experiences, acknowledgement of talents, and positive reinforcement from the performing arts experience.

Rhythm and music are explored through a set of percussion instruments. In addition to the resonant melodious quality, the instruments provide auditory and kinesthetic feedback for the child. The basic concepts of the Orff-Kodaly system have been modified for use with the hearing impaired. Enjoying music motivates the child to make use of amplification and residual hearing.

Creative movement experiences allow the child to express freedom in total bodily communication and self expression. The child can find fulfillment through dance as it simultaneously involves his inner being and his physical body. The dance classes have also helped the students to become aware of and have pride in their bodies. This has lead to proper diet, exercise, better hygiene, and an acceptance and better understanding of their physical and emotional being.

Ballet and jazz techniques are offered also for a more structured and self-disciplined dance expression. The control and mastery of the body and mind are blended into a movement routine.

The hearing impaired child participating in the arts performs interchangeably with the hearing child. His dramatizations, musical ensembles, art forms, or movement selections are recognized for the beauty of their expression.

An experience comes to mind to best express a conclusion. After a ballet performance composed of hearing and profoundly deaf children a woman was overheard saying, "I can't tell which ones are deaf." It doesn't matter "which ones are deaf" when they are given an opportunity to communicate, share their capabilities and talents, and discover their own potentials. They are all just children!

REFERENCES

1. Bragg, Bernard: The Human Potential of Human Potential: Art and the Deaf, *Affecting the Human Potential of the Deaf Student: Another Role for Educational Media*, University of Nebraska at Lincoln: Midwest Regional Media Center for the Deaf, 1972, p. 85.

2. *Basic Education Rights For The Hearing Impaired.* 1973 Annual Report, The National Advisory Committee On The Education Of The Deaf: U.S. Department of Health, Education, and Welfare, 1973, p. 8.

3. Furth, Hans G.: *Deafness and Learning a Psychological Approach.* Belmont, Calif.: Wadsworth Pub. Co., 1973.

4. Furth, p. 102.

5. Voyat, G.: "Thinking Before Language? A Symposium". *Childhood Education:* Vol. 48, No. 5, Feb. 1972, pp. 248–251.

6. Furth, p. 59.

7. Furth, p. 60.

8. Guilford, J. P.: *Intelligence, Creativity, and Its Educational Implications. San Diego:* Robert R. Knapp, 1968, pp. 77–150.

9. Torrance, E. P.: *Rewarding Creative Behavior.* Englewood Cliffs: Prentice Hall, Inc., 1965.
10. Myklebust, Helmer R.: *The Psychology of Deafness.* New York: Grune & Stratton, 1964.
11. Sneijders, J. Th.: Psychology of Hearings and Non-hearing. *Proceedings of the International Course in Paedo-Audiology.* Groningin University, 1953.
12. Jerslid, Arthur T.: *In Search of Self.* New York: Teacher's College, Columbia University, 1952, p. 369.
13. Bragg, p. 82.

HUMANISTIC ASPECTS OF TEACHER EDUCATION FOR THE HEARING IMPAIRED

Lee Murphy, Ed. D., Assistant Professor, Department of Special Education and Rehabilitation, University of Tennessee, Knoxville, Tenn.

The prevalent theme in many of today's classrooms, on any level, is that of boredom and mindlessness. One way to overcome this situation is not to exist in education as a bureaucrat, not simply play out a series of static impersonal roles in the classroom. University professors responsible for the training of teachers offer them all the good ideas, the innovations, the correct attitudes, possible experiments to try out, and a countless array of theories. The people out in the world, in the schools, are the ones who fail. They are caught up in control, in keeping things as they are, in maintaining a proper balance. Herbert Kohl in the "Open Classroom" states:

> Our schools are crazy. They do not serve the interests of adults, and they do not serve the interests of young people. They teach "objective" knowledge and its corollary, obedience to authority. They teach avoidance of conflict and obeisance to tradition in the guise of history. They teach equality and democracy while castrating students and controlling teachers. Most of all they teach people to be silent about what they think and feel. To try to break away from stupid schooling is no easy matter for teacher or student. It is a lonely and long fight to escape from believing that one needs to do what people say one should do and that one ought to be the person one is expected to be. Yet to make such an escape is a step toward beginning again and becoming the teachers we never knew we could be.[1]

But is the problem really "out there"? Are not student teachers themselves dissatisfied with their own schooling? Carl Weinberg in his "Humanistic Foundations of Education" writes "College students are becoming aware of their needs as independent human beings, and their evaluation of instruction begins and often ends with the question, 'Is this important to me?' "[2] Students have to feel that education and teaching are important. Professional educators in schools of education have not answered the question of human value. What, therefore, can be expected of the teachers they produce?

College students have supplied us with the word of the day—relevance. It's a feeling that what you are doing is what you have to do. Students want interesting courses, but they also have deep rooted desires for studies to help them become better persons and perform effectively in society. If courses remain uninteresting and irrelevant, education departments will be devoid of people who want to solve problems of inequality and neglect. Weinberg again comments on Teacher Education Programs:

---

[1] Herbert R. Kohl, The Open Classroom, (New York: Vintage Books, 1969), p. 116.

[2] Carl Weinberg, ed., "Humanistic Foundations of Education," (Englewood Cliffs: Prentice-Hall, 1972), p. 3.

> Within the next ten or twenty years people on college campuses will make few major changes in the established structures of our society. In the schools of education we will still continue to produce bodies who will staff the public schools. And we will produce administrators able to keep the lid on, so that those who receive a very poor education will not cause us much difficulty because of it. But if this is to be the extent of education in this country, at least those of us who wish to make changes will be able to say that we did not participate in maintaining the old functions of grinding out a legion of alienated students who then become alienated to change them. But this requires commitment and wisdom. Wisdom is rare everywhere. It differs from knowledge insofar as it involves making sense of knowledge within the context of a life style. Wisdom is understanding how your knowledge fits into how you need to live your life. We think this is what students are searching for.[3]

How do students experience learning? It's not enough to tell them. There are already too many notebooks crammed full of notations neatly filed away in teachers' desks. Students and teachers are more important than the materials and objectives of the educative process. It is easier to follow the traditions and the "things" that have worked, but it is time to combine convention and personal fulfillment. The humanistic approach to preparing teachers can be a model for teaching children. It is unlikely that teachers can give their students any more than they have perceived in their own education.

What is it that we value in education? In schools, we have standards of academic performance, ethical standards, standards of popularity and standards of interpersonal relations. These are the standards that most students try to achieve, and in terms of which many are crucified for failing to achieve. We work hard even if we hate what we are doing—we memorize, research, read, write, and compete endlessly for success. Weinberg captures the mood of education—on all levels:

> Because we value stability, we become uncomfortable when confronted with the possibility of instability in our educational life. When we are permitted a great deal of flexibility in the way we learn, we often become anxious and ask for structure. We want an outline of what we are supposed to know. The one thing in education that we do not seem to value very much is learning. There is very little time to learn when we have to get good grades, which we seem to value much more.[4]

Students want educational reform. They want to explore the depths of their own humanness and potential for growth. They want schools to be human places. Weinberg continues:

> Education and educators can play a passive role, as they have always done, and accommodate to traditional social expectations and led us further down the path toward total personalization, or they can serve as an active agency of social change. They can do this by making the school the kind of therapeutic environment that is required for persons to grow as individuals in productive affiliation with others, and to be total human beings.[5]

How can teachers be innovative? It is difficult enough to teach, to worry about individual differences, and to work within the established system of the school. Is it fair to ask for more? To innovate is to ask for criticism. It is risky. Carl Weinberg suggests that students should form groups centered around innovative norms. This group would then anchor values for the student. "As the student works in his teaching, he will be conscious of his allegiance to that group and of the responsibility of living up to the innovative values."[6] It is his theory that as teachers, we should work in innovative reference groups where they can take comfort in the group, return to it to anchor their values and to continue their attempts at humanizing the educational institution of our time.

---

[3] Ibid., p. 5, 6.
[4] Ibid., p. 80.
[5] Ibid., p. 99.

George Brown in "Human Teaching for Human Learning" presents a stimulating approach to the education of teachers. He looks at the educational scene as it exists and demonstrates how teaching and learning can at once become both more human and more productive within that context. This book is about affective education. Doctor Brown and his colleagues use a variety of techniques and disciplines from the humanistic psychology of Abraham Maslow and Carl Rogers. The strength of this new beginning is its eclecticism, its lack of orthodoxy, and its willingness to experiment. Brown writes:

> After examining conventional curricula, we explored ways to add to the dimension of personal meaning and relevance by integrating appropriate personal and interpersonal feeling experiences into the teaching of the subject matter. When we did this well, the curriculum came alive. When we did it poorly, very little was lost, because often, in terms of the learner, there was little there to be lost in the first place.
>
> When we view the appalling wastelands of the educational establishment, when we hear the monotonous drone of a teacher's voice, when we see the classrooms with row on row of vacant eyes, when we experience the vast dullness dotted here and there by new gimmicks and techniques, we too want to tear at the tedium and the waste.[7]

There is a need for affective learning and confluent (the terms for the integration or flowing together of the affective and cognitive elements in individual or group learning) education. Attempts at communication based on intellective powers are fragile efforts when personal relevance is involved. People feel and value as well as think about the world around them.

In order for our schools to teach how to think, how to learn, and how to apply what they have learned, we require schoolteachers who possess an imaginative way of thinking. We need teachers who are emotionally, intellectually, pedagogically, and humanly equipped to work with students of all sorts. It isn't enough to change certification requirements. The academic community seems ever ready to agree with T. S. Eliot's Prufrock who was able to rationalize himself into a state of inertia with the belief that 'there will be time . . . time for a hundred indecisions and for a hundred visions and revisions.' Students protest against 19th century educational methods. This generation of students knows that formal learning is no longer in books and that the teacher is no longer the sole guardian of what can happen in a given learning environment.

Don Bigelow in "The Liberal Arts and Teacher Education" writes:

> What matters, then, is the kind of context that we can create for teaching and the largeness of the demands made upon the teacher. The purpose of education is the molding of men rather than the production of knowledge. We lack Socratic teachers; we need men not programs, from kindergarten to graduate school—men who will give students a profound motivation for learning, the hope of becoming better men. I do not suggest that teachers must be heroes or great men

---

[6] Carl Weinberg, "Perspectives for Reform in Teacher Education," p. 69.

[7] George Brown, "Human Teaching for Human Learning" (New York: The Viking Press, 1971), p. 234.

> but they must understand greatness and desire it for themselves and others—prophets, poets, scientists, scholars, intellectuals, men who will not toe the line, individuals as large as life, troublesome, irrepressible, and exemplary. Teaching will not be restored by tinkering with the curriculum, by minor structural changes, or modest innovations in graduate degree programs.[8]

It is the feeling of those who contributed to his text that there should be created, under the umbrella called the university, a new university that has something to do with love and kids and teaching, a university that has to do with the problems of America—give it goals, instructional theory, and power. They are convinced that there will be little change without accountability for what's out there five years from now. It is striking how frequently the authors who write about improving teacher education constantly refer to the fact that what we need are feeling, caring, loving, acting men who demonstrate their love through their behavior.

Charles Silberman's "Crisis in the Classroom", has a last section entitled "The Education of Educators", his views of education are similar to the others thus far presented:

> It is impossible to spend any prolonged period visiting public school classrooms without being appalled by the multilation visible everywhere—mutilation of spontaneity, of joy in learning, of pleasure in creating, of sense of self. The public schools are the kind of institution one cannot really dislike until one gets to know them well. Because adults take the schools so much for granted, they fail to appreciate what grim, joyless places most American schools are, how oppressive and petty are the rules by which they are governed, how intellectually sterile and esthetically barren the atmosphere, what an appalling lack of civility obtains on the part of teachers and principles, what contempt they unconsciously display for children as children. And it need not be. . . . What makes change possible, moreover, is that what is mostly wrong with the public schools is due not to venality or indifference or stupidity, but to mindlessness. . . . it simply never occurs to more than a handful to task "why" they are doing what they are doing—to think seriously or deeply about the purposes or consequences of education.
>
> If mindlessness is the central problem, the solution must lie in infusing the various educating institutions with purpose, more important, with thought about purpose, and about the ways in which techniques, content, and organization fulfill or alter purpose.[9]

The reforming of education needs fundamental changes in the education of teachers. The new teachers will have to be educated to self-scrutiny and to serious thought about purpose. Silberman continues "The education students are merely taught to use the various teaching techniques which are not related to one another, still less to any conception of what teaching is all about or any notion of which strategies are most appropriate for which teaching objectives, or with which kinds of students or which subject matters."[10]

> After twelve years of dull, repressive, formal public schooling and three and a half years of uninspired formal college teaching, six months of practice teaching in the same kind of classroom is almost bound to convince the student-teacher that that is the way teaching has to be. Almost inevitably, therefore, that is the way he tends to teach when he finishes his training.[11]

The real education for teachers does not begin and end in the colleges or universities. It begans and continues in the everyday classroom. The emphasis should be shifted from teaching to learning. The schools will become places for inquisitive minds to seek out and grasp the mysteries of the unknown when teachers learn how to teach curiosity and a desire for knowing. When teachers become learners, children will learn.

---

[8] Donald Bigelow, "The Liberal Arts and Teacher Education" (Lincoln: University of Nebraska, 1971), p. 40.

[9] Charles E. Silberman, Crisis in the Classroom (New York: Vintage Books, 1970), p. 10–11.

[10] Ibid., p. 458.

[11] Ibid., p. 459.

I think the most pointed contribution that Silberman makes in his book is his reaction to the "mindlessness" of our people in the present educational system. Children in the schools jump at the chance to become involved in innovative experiences, to discuss things among themselves, to use independent study periods as a springboard for preparing what they really care about. I find student teachers less interested in learning and more concerned about escape from the business of being educated. They allow precious time to slip away. It is so very sad to see young men and women hurry down the pathway of education picking up courses, grades, and credits without reflecting on how they will use it all or why they want to use it.

George Leonard in his book, "Education and Esctasy," captured the mood and the direction of present-day educational practices. He phrased it in everyday language so that no one would have difficulty understanding his meaning. Education, as we have known it and as it is being practiced, no longer adequately prepares students for our world. Teachers and parents have been satisfied with an elementary and secondary education which leads to college, to the "right" spouse, to the "right" occupation, to the "right" address. The system functioned well. Why should we attack existing arrangements?

To learn is to change. Education is a process that changes the learner. "However, the task of preventing the new generation from changing in any deep or significant way is precisely what most societies require of their educators." [12] It's time for our expectations for our children to change. We sat, as Leonard observed in his travels through American classrooms, "counting out a few seconds of learning for every hour of waiting for a bell to ring, waiting for a kind of teacher that we may have never known, waiting for something to happen." [13] How many teachers can make "something" happen everyday? There is little evidence that a teacher per se can even help learning, but there is evidence he can hurt it. Leonard redefined the work of education. "One of the first tasks of education is to return man to himself; to encourage rather than stifle awareness; to educate the emotions, and the senses, help people become truly responsive and therefore truly responsible.[14] Our concept of teacher must change as well as that of education in general.

Leonard was attacking the basic conditions of education because they created a resistance to learning. He wanted the achievement of moments of ecstasy as the goal of all education. Such feelings can grow out of an awareness of every aspect of human existence. Teachers who achieve this goal will have a better chance of leading others to it.

What are schools for? Leonard believed that schools should help children learn. He thought that schools should lead children to learn the following:

> commonly agreed upon skills and knowledge of the ongoing culture; to learn it joyfully and to learn all of it as strictly tentative.

---

[12] George Leonard, "Education and Ecstasy" (New York: Delacorte Press, 1968), p. 5.
[13] Ibid., p. 9.
[14] Ibid., p. 127.

> delight, not aggression; sharing, not eager acquisition; uniqueness, not narrow competition.
>
> heightened awareness and control of emotional, sensory, and bodily states and through this to learn increased empathy for other people (a new kind of citizenship education).
>
> how to enter and enjoy varying states of consciousness in preparation for a life of change.
>
> how to explore and enjoy the infinite possibilities in relations between people—perhaps the most common form of ecstasy.
>
> how to learn.[15]

Teachers with the same goals will foster such learning in their students.

It is time for teaching how to feel empathy, how to remain cool in a crisis, how to tolerate ambiguity. Teachers have based their behavior in the classroom on traditional expectations and on the accumulated knowledge of what seems to work. Experiences conducive to personal growth should be made a vital part of the education curriculum. Teachers need to feel the responsibility for their actions, to exhibit genuine feelings, and to become actors in life situations rather than simply passive reactors to it. Those who have been acclimated to a passive and sterile role in their teacher preparation programs cannot then assume total responsibility in a short period of time. There has to be an open and honest confrontation with self and others in order to have effective growth and development. A teacher today must have the qualities of thought and action that facilitate intelligent self direction.

Good teaching is an intensely personal thing. Combs defined an effective teacher as "a unique human being who has learned to use himself effectively and efficiently to carry out his own and society's purposes in the education of others." [16] He also offers suggestions as to how such a teacher can be produced. He gives the insight that teachers fail because they are unable to transmit what they know so that it makes a difference to their students. Programs might better teach how to become teachers rather than teach about teaching. "The good teacher's task is to stimulate and facilitate learning. The measure of his success is not the degree to which his students are like him but the degree to which he has assisted them to transcend him." [17] In reality most teachers seem to be afraid their students might surpass them. "The genius of good teaching lies in the capacity to fire the imagination." [18] The individual must be willing to disclose himself and to permit other people to see him as he is, to know what he thinks, believes, and stands for. Such an approach to education does stimulate the imagination but it is based on risk-taking procedures.

Combs has a series of questions for teachers to ask themselves:

> What is important? What am I trying to do? What do school and society want of me? What do I want out of teaching? Are the things I'm doing fulfilling my purposes? [19]

Combs does not see teaching as a mechanical matter of using the right method at the right time. Teaching is a creative act involving the effective use of one's self as an instrument. Preparing teachers is not a question of teaching them how but of helping each to discover his own best ways. This approach is based on self risk—it's alright to be me.

---

[15] Ibid., p. 132.

[16] Arthur W. Combs, "The Professional Education of Teachers" (New York: Allyn and Bacon, Inc., 1965), p. 9.

[17] Ibid., p. 45.

[18] Ibid., p. 64.

[19] Ibid., p. 89.

EDUCATIONAL MEDIA, INSTRUCTIONAL TECHNOLOGY, VISUAL LITERACY AND VERBAL LITERACY

Paul McLellan, Ed. D., Director Audiovisual Resources, Virginia School for the Deaf and the Blind, Staunton, Va.

As educators, and special educators at that, we know that "machines may educate, but they will not inspire. Audiovisual devices do have a place in education—as aides." "Since education is basically a communicative process involving the interchange of thoughts, ideas, and concepts, to a large extent its effectiveness depends upon the ability to communicate accurately and effectively." (2, p. 32) "Every learner must develop the motivation to learn the want-to and he must couple this with the methods of learning the know-how, and the know-why." (3, p. 51) In the education of the deaf, in addition to "know-how", and "know-why" as media conscious teachers, we would add show how, show why, show who, show where, show when, and show what, a definite visual approach to learning to help offset the effect of the hearing loss.

All of us, whether we will admit it or not, remember a teacher or teachers who were so interested in, or loved an educational field so much that they inspired and intrigued us as pupils to see if we could get as much pleasure from the subject as they did. With our nation placing men on the moon, isn't motivation one of the keys to learning? (1, p. 6)

The motivational factor of learning makes media production for instruction essential. Teachers are concerned with what is media, who uses it, and why use it? They are concerned with the relationship of media and learning theories.

As teachers of the deaf we "should add structure and direction to the learning process." (4, p. 4) "The teacher should use every means at his disposal to make education interesting, vivid, and involving" for the pupil. "If he is not 'turned on', he may be tuned out." (2, p. 6)

What is media? In schools for the deaf, emphasis is on the visual impact on learning that instructional materials have. Media means films, slides, filmstrips, transparencies, photographs, pictures and the equipment for making and utilizing these items. Media includes commercial and "home made" maps, globes, graphic and display materials, chalkboards, posters, realia, exhibits, books, booklets, pamphlets and games. (2, p. 14) Records, sound tracks on films, cassettes and audiotapes, as well as radio and television with sound to emphasize auditory training, is a part of education of the hearing impaired child.

"Educational technology does not mean hardware, as such, but refers rather to a 'technology' in a generic sense, as a derivative of an underlying science . . . the science of behavior, especially learning theory, as a primary 'underlying science' from which application to technology of instruction might be anticipated." (5, pp. 372–73) This quote emphasizes two major techniques. They are educational technology, and the science of behavior.

"The heart of education is the student learning, and the value of any technology used in education must therefore be measured by its capacity to improve learning." (6, p. 7) "Technology, we believe, can carry out its full potential for education only insofar as educators embrace instructional technology as a system and integrate a range of human and nonhuman resources into the educational process." (6, p. 7)

The title uses the word media. What do we mean when we use such a word? Possibly, the following definition will help clarify the basic understanding of the use of media in schools for the deaf. "Instructional technology . . . means the media born of the communication revolution which can be used for instructional purposes alongside the teacher, the textbook and blackboard . . . It is a systematic way of designing, carrying out, and evaluating the total process of learning and teaching in terms of specific objectives, based on research in human learning and communication, and employing a combination of human and non-human resources to bring about more effective instruction." (6, p. 19)

In today's educational literature we encounter the term, behavioral approach to education. What is meant? Does it apply to the use of media in the education of the deaf?

"Although such an approach (the behavioral approach) is still questioned in educational circles, its support in learning research and instructional design is such that no alternatives seriously rival it. The behavioral approach elicits the inevitable conclusion that the quality of an educational system must be defined primarily in terms of change in student behavior. (7, p. 6) To us in the education of the deaf child, changes in behavior must mean learning. And to educators of the deaf, stress is on learning for the hearing handicapped child. It is mandatory that emphasis be placed on visual learning to help overcome the obstacle created by deafness.

We in the education of the deaf are concerned with educational instructional technology, educational media, and its use for and in instruction, and with the behavioristic effects these have on learning. However, despite these ramifications, the major issues in the use of technology in education reside not so much in the development of technologies, as in the reeducation of teachers in the value of technology as an aid to instruction. When educators look at technology as a source for developing new alternatives and individualizing instruction, rather than as a dangerous, mechanistic, intruder, then the existing wealth of technological developments will have its desired effect upon the world of education." (6, p. 37) While concern here is for general education, it can also be considered pertinent to the education of the deaf.

The reeducation of teachers in the value of technology and media use in education of the deaf can be a stimulating, motivating factor of untold benefit to the teacher of the deaf child. "Important teacher competencies required for efficient utilization of educational media include the following: (1) understanding of the behavioral processes involved in learning and communication, (2) knowledge of media characteristics and capacities, (3) ability to evaluate and conduct or participate in experimental studies of teaching and learning, (4) familiarity with appropriate materials and their sources, and (5) command of necessary mechanical skills." (9, p. 162)

"Using educational media to implement in-service training objectives is psychologically sound, economical, and effective for a variety of purposes. The adage 'that teachers teach not as they are taught to teach, but as they are taught' has a great deal to it." (9, p. 170)

Other essential factors in the limited use of media in education is brought out in a study of a group of educators with a mean teaching experience of 6.2 years, and with no teacher with less than one year of experience, who were taking a college course in audiovisual instruction. The study was based on 1. availability of audiovisual equipment, 2. availability of audiovisual materials, 3. accessibility of audiovisual equipment, and 4. accessibility of audiovisual materials." (10, p. 189) Analysis of the data indicated that the population was not concerned about the amounts of audiovisual 'equipment' their schools owned, so long as that equipment was accessible when it was needed. On the other hand, the population attached great significance to the amount of audiovisual materials their school owned as well as the accessibility of such materials. The obvious recommendation to be drawn from such findings is that school administrators and educational communication personnel attend more carefully to acquiring and making accessible both audiovisual equipment and materials." (10, p. 192)

While these findings are of essential importance to schools in general, the emphasis on "acquiring and making accessible" is not the utmost concern of schools for the deaf. They in most cases have received audiovisual equipment and materials in great quantity from Media Services and Captioned Films, a part of the Bureau of the Handicapped, a Division of the Department of Health Education and Welfare of the Federal Government. Utilization of the equipment and materials in this writers experience, is the most vital point of concern for schools for the deaf in the United States.

Teachers of the deaf child are today becoming more and more aware that "educational media . . . are an integral part of all learning tasks." (11, p. 3)

In schools for the deaf, academic and vocational teachers are fast becoming aware of the tremendous changes taking place in the education of the deaf child. All teachers of the deaf child realize that "media can play a vital role in assisting the hearing handicapped student develop his ability to conceptualize, to exercise his power of reasoning, to stimulate his interest in inquiry and discovery, to gain an appreciation of the world in which he lives, and to communicate with his associates." (11, p. 47) They are also becoming cognizant of "the relationship between print and non-print media and that traffic in non-verbal signs and symbols is not competive but complementary." (9, p. 9)

With the use of the voluminous quantity of media equipment and materials the schools for the deaf have received in recent years, instructional efforts in the education of the deaf child is demanding an expressed, working day-to-day philosophy of visual education for the deaf child. "From the vast proliferation of materials on the educational scene has come a renewed emphasis on the value of and the need for a more visual approach to learning. This concept has evolved to become what is now known as visual literacy." (12, p. 11)

Vocational, home economics, industrial arts, and art teachers all know that the value of "show me" techniques they use routinely in their classes, emphasize the vital place visual literacy has in education for all children, and especially for the deaf child. "When we speak of visual literacy, we refer to the numerous techniques used by people to communicate with each other in non-verbal ways. We mean body language, art forms, pantomime, graphic expression, filmed expression, picture story expression, and many others." (12. p. 13)

"Visual literacy, like all other aspects of education begins with the child." (13, p. 5) For the deaf child, visual literacy is an aspect of education for them which should help remove the learning difficulty created by deafness. "As might be expected, visual behavior is analogous to verbal behavior. A visually literate child can 'read' visual language with skill. He can 'write,' that is, compose visual statements with skill, perhaps with eloquence." (13, p. 7) Visual languages are many, "for example 'signing' (not finger spelling) used by the deaf, and the body languages of different cultures." (12, p. 7)

Visual education is not a new factor in schools for general or special education. Visual education is expanded to encompass a wider, more comprehensive viewpoint and terminology, visual literacy . . . "Just as widespread verbal literacy had to wait until writing was easy and typewriters were common, visual literacy didn't become possible until visual communication was made easy by visual technology and possible on a mass scale." (13, p. 9)

Today's general and special education are becoming aware of the visual age. They are realizing that, "first, this visual age requires visual as well as verbal skill of everyone, second, the verbal and visual skills are interconnected and both must be developed." (13, p. 9)

"As one surveys education at almost any level in the United States, he realizes that most instructional materials and methods use memorizing rather than thinking as the key instructional process. If thinking is stressed instead, the curriculum will be problem centered and question oriented, not answer oriented." (4, p. 6)

The need for thinking as a basic part of learning is a problem for all of us in education, whether it be general or special education. It is felt that media can and must be used in the education of the deaf as a stimulant to enable every hearing handicapped child to use all of his potential for learning success.

REFERENCES

1. Dorband, Elizabeth, "Feedback" *The Grade Teacher*, CCM Professional Magazines, Inc. February, 1972 pp. 6–7.

2. Culclasure, David, "Effective use of Audiovisual Media," Successful School Administration Series, Prentice-Hall, Inc. New Jersey, 1969.

3. Dale, Edgar, *Building a Learning Environment*, Phi Delta Kappa Educational Foundation, Indiana, 1972.

4 Haney, John B., Ullmer, Eldon J., *Educational Media and the Teacher*, Wm. C. Brown Company, 1970.

5. Lumsdaine, A. A., "Educational Technology, Programmed Learning, and Instructional Science," in *Theories of Learning and Instruction*, National Society for the Study of Education, Chicago, 1964, pp. 371–401.

6. Commission on Instructional Technology, *To Improve Learning*, Committee on Education and Labor, House of Representatives, United States Government Printing Office, 1970.

7. Tosti, Donald T., Ball, John R., "A Behavioral Approach to Instructional Design and Media Selection," *A–V* Communication *Review*, Spring, 1969.

8. Saettler, Paul, "Instructional Technology: Some Concerns and Desiderata," *A-V Communication Review*, Winter, 1969.

9. Brown, James W., Norberg, Kenneth D., *Administering Educational Media*, McGraw-Hill Company, New York, 1965.

10. Aquino, Charles C., "Teacher Attitudes Towards Audiovisual Instructional as They Are Influenced by Selected Factors Within Teaching Environments," "*A-V Communication Review*, Summer, 1970.

11. Stepp, Robert E., "Utilization of Educational Media in the education of the Acoustically Handicapped Student," *Institute for Media Specialists Handbook*, Midwest Regional Media Center for the Deaf, University of Nebraska, January, 1971.

12. Ross, Samuel B., Jr., "Visual Literacy—A New Concept?" *Audiovisual Instruction*, May 1972.

13. Fransecky, Robert B., Debes, John L., *Visual Literary: A Way to Learn—A Way To Teach*, Association for Educational Communications and Technology, National Education Association, Washington, D.C. 1972.

BEG, BORROW, INNOVATE

Roberta Borron, Teacher, Second Grade, Texas School for Deaf, Austin, Tex.

Presented by: Charles D. Thompson, Annette S. Thompson (Elementary Supervisor, Elementary Deaf) Media Director-Instructor, West Virginia School for Deaf and Blind, Romney, W. Va.

Introduction

> We, as teachers, do not teach.
> We merely present.
> The learner—perhaps motivated by us as teachers—learns for himself.
>
> —Anon.

He is not a passive recipient of our vast knowledge, but rather an active—sometimes too active—gatherer and sorter of information.

As teachers of hearing impaired learners, we are obviously not presenting successfully. Therefore it is time to change. It is time for some of us to stop considering ourselves as teachers in an insular field. It is time to survey and borrow from many related fields to help our children reach their full potential. I am not suggesting that we attempt to become authorities in a variety of areas, but that we have a "speaking acquaintance" with many areas so that we can borrow what we need for our children. Many of these ideas are accepted and promoted by educators of the deaf, some have been incorporated into teacher training programs, but I am afraid that many have not penetrated the classrooms and reached the children.

Psychology of learning

Some of the new theories of learning include all of the input from a situation and all the past experiences of a child. He does not walk into a classroom sterile, but brings with him years of experiences, physical feelings, and emotional feelings about himself and others. Within the classroom the same factors are at work. To these, academic pressures are added. A child who is physically uncomfortable or emotionally upset, or has a poor self-image, is not in a position to do well on academic material. Many teachers recognize this, but all too often there is no conscious or consistent effort to help the child.

Child development

Normally, all children pass through the same sequence of physical and mental development. Each child develops at his own pace, which may not be matched to his chronological age. Because developmental changes in a child's body are fairly obvious, we are often more careful in matching physical tasks with physical development than we are in matching intellectual development.

Piaget divides a child's intellectual development into four stages; sensorimotor, preoperational, concrete operational, and formal operational stages.

A hearing impaired child, because of the lack of auditory input, develops differently from a hearing child. During the sensorimotor period, a hearing impaired child is receiving and coordinating stimuli from four senses, not five. During the preoperational stage the hearing child receives language input with his experiences and internalizes that language as his symbol system. The hearing impaired child, if he does not receive language during this period, internalizes something different, perhaps a pictorial system. During this stage there is an additional difficulty of experiences perhaps being limited. It is understandable for a parent to be reluctant to let a hearing impaired child cross a busy street by himself.

When he reaches the concrete operational stage, he learns from objects and experiences, but may be severely limited in his ability to gain or seek verbal information. Yet his intellectual development continues, sometimes forming wrong concepts because of lack of input or feed-back.

Language is an important tool for a developing mind. It symbolizes concepts, it expresses them, and it is a medium for gaining new information. It has been suggested that language structure can influence thought processes. Furth carries that idea even further to suggest that some hearing impaired do not progress well into the formal operational stage because they lack the important tool of language.

Linguistics

If we wish to help hearing impaired children acquire better language, we must be aware of its characteristics ourselves. The study of language is now approached from the sentence, and the function of words and phrases within that sentence. The English language is considered to have a finite number of basic sentences, which are changed or combined to form an infinite number of new sentences. Because we are speakers of the English language, we have obviously extracted and internalized the rules of the language. However, we must bring these rules to a conscious level, so that we may present language to our children more efficiently.

Psycholinguistics

A hearing child extracts the rules and regularities of a language and begins to use it. After overgeneralizing, he refines the rules and learns the exceptions. Input necessarily precedes output at all stages and the stages overlap considerably. The acquisition of language has a definite pattern and sequence. Normally, the learner is exposed to it in functional situations during the early years of his life.

I believe that our children can learn the English language in the same manner as hearing children if they are provided with language input in analogous situations. The mistakes that our children make are developmental mistakes. Given enough input, they can extract the rules of the language and correct the errors. I suggest that if we are cognizant about language and its acquisition, we can structure a more efficient program that provides language and practice situations in the normal sequence, and when the child is ready for them. I further suggest that we need to spend more time in conversation with our children, using language as the tool of communication that it is.

English as a second language

Many of our children are learning a second language—English. It is very sensible then to borrow teaching principles and techniques from the field of English as a Second Language. The primary goal of an ESL program is the same as ours, to develop in the learner the four basic modes of communication: understanding, speaking (we may modify this), reading, and writing. Another of the basic tenets of ESL is to use the speaker's native language to teach the second. A third principle that is important for us is that ability in any language skill will increase in direct proportion to the amount of meaningful practice given in that skill.

Media

Language does not exist in a vacuum. It symbolizes something. This creates the problem of providing or duplicating experiences, which is especially important with children in the preoperational or concrete operational periods of development. If the actual experience is impossible or undesirable, vicarious experiences can be provided through dramatization, pictures, slides, filmstrips, movies, T.V., tapes, or field trips. An innovative teacher can structure many situations, but he or she must be aware of the relationship of the chosen media to the actual experience.

Teacher training

Unfortunately, a teacher learns much of this after entering the classroom. For the mutual benefit of the teachers and learners, teachers in training need exposure to these other areas. They also need more contact and interaction with both hearing impaired children and adults. The future teacher needs to learn how to have a carefully planned student-centered classroom, instead of a teacher-centered one. Perhaps because of the difficulty of measuring affective objectives, we have stressed cognitive development. We need more deliberate development of those areas in the affective domain.

Teaching is a difficult and complex profession. Our children will benefit from better trained teachers.

Electronics and acoustics

The field of electronics needs to provide us with more effective amplification devices, which have better fidelity and more range of receiving. They need to be more child-proof, too. We, as teachers, can learn how to use the electronic equipment we have more efficiently and help the children learn to use it to better advantage.

The field of acoustics can help by providing better buildings in which our children can learn. Even soundproofing materials on walls and ceilings cut down much of the reflected sound. Drapes, curtains of soft materials serve the same purpose. Rugs, pillows, and even screens or chart racks can help the sound environment of a classroom.

Deaf education

Last—perhaps it should have been first—we need to take a careful look at our own field of deaf education.

Traditionally, language and reading have had top priority in teaching the deaf. This ignores the prerequisites for learning. A learner must have a good self-image and be comfortable before he can learn what he is supposed to learn.

Our top priority for education of a hearing impaired child should be acceptance of that child as a hearing impaired individual. He is not a hearing child. He has different concepts, different modes of learning, and different modes of expression. Parents and teachers both need to accept him as he is. On this same topic of acceptance—we need to educate the hearing world. Unfortunately too many hearing people equate speech with intelligence. Society in general needs to accept the hearing impaired individual.

Second on my list of priorities is self-concept. After a child has been accepted, he can accept himself. He must have the opportunity to develop his self-image and personality.

My third priority is a chance to think. In our eagerness to remedy the obvious lack of language, I believe that we over-emphasize it to the extent that we build in other problems. We are often so structured and teacher-centered in our presentation, that the children do not have a chance to develop thinking skills.

Fourth on the list of priorities I place language and reading. They are built into the first three priorities, but the focus is on them, not on language, per se.

There is no intention in this list of priorities to slight language learning. It must be acquired if an individual is to function in our language-oriented society. However, the other areas must not be neglected in helping our children develop to their full potential.

One means of compensating for the language problem is to present appropriate concepts non-verbally. For example, many math concepts can be presented without language. The child does not need to verbalize what he is doing; if he can do it, he must understand it. Some media, such as movies, can present concepts without language. However, the teacher must decide the objective—is it concept or vocabulary?

Conclusion

We have covered a lot of areas very superficially. I am not asking that you agree with me. Many of you won't. That is as it should be; that is how we grow. But I am asking that you take an objective look at what we are doing in our classrooms.

We, as teachers, do not teach.
We merely present.
The learner—perhaps motivated by
us as teachers—learns for himself.

REFERENCES

Bellugi, U. and Klima, E., "The Roots of Language in the Sign Talk of the Deaf," *Psychology Today:* 6, 1972.

Carroll, J. B., *Language and Thought, Englewood,* Cliffs, New Jersey: Prentice-Hall, 1964.

Finocchinaro, Mary, *Teaching English as a Second Language*, New York : Harper and Row; 1969.

Furth, Hans G., *Thought Without Language*, New York : Free Press, 1966.

Furth, Hans, *Deafness and Learning, A Psychosocial Approach*, Belmone, California : Wadsworth, 1973.

Furth, Hans G. and Wachs, Harry, *Thinking Goes to School: Piaget's Theory in Practice*, New York : Oxford Press, 1974.

Gleason, Jr., H. A., *Linguistics and English Grammar*, New York : Holt Rinehart and Winston, Inc., 1965.

Goldberg, J. Phillip and Bordman, Marcia B., "The ESL Approach to Teaching English to Hearing Impaired Students", *American Annals of the Deaf*, Vol. 120, No. 1, Feb., 1975.

Lenneberg, E., *Biological Foundations of Language*, New York : Wiley and Sons, 1967.

McNeill, David, *The Acquisition of Language, The Study of Development Psycholinguistics*, New York : Harper and Row, 1970.

Piaget, J., *The Language and Thoughts of the Child*, New York : World Publishing Co., 1955.

Roberts, Paul, *English Syntax*, New York : Harcourt, Brace and World, Inc., 1964.

Texas, Statewide curriculum for deaf education.

ART CURRICULUM DESIGN, CONSTRUCTION, AND EVALUATION

James L. Tucker, Art Instructor; Jean Fulton, Instructional Design Specialist; William D. Grant, Evaluation Specialist; and Barbara L. Petterson, Art Instructor, Model Secondary School for the Deaf, Washington, D.C.

The general goal of the visual arts department of the Model Secondary School for the Deaf (MSSD) is to develop the students' abilities in these six areas:

1. Perceiving aesthetic elements in the arts.
2. Responsive to aesthetic elements in art.
3. Producing works of art.
4. Understanding art.
5. Valuing art as an important realm of human experience.
6. Developing a critical language for describing works of art and the environment.

The first five of these goals are not unlike those of other art programs around the country. However, unlike other schools, the program at the MSSD gives strong emphasis to goal 6, the language component, because of the school's emphasis on communication. Most lessons are a balance between practical experience and concept or language formation.

The course structure of the MSSD's art program presently offers four fields of study: General Art, Ceramics, Printmaking and Sculpture. An expanded program will include courses in Art Appreciation, Art History, textiles, and others. This presentation/workshop provides a general overview of programs in art which are now under development, a detailed discussion of the content of one unit recently field tested, and results of the field testing of two units.

The units "Line" and "Texture" were field tested in five schools for the hearing impaired in five states. Both units produced measured cognitive growth in students. The overall mean gain from pre-test to post-test in cognitive growth was 70%. Students' and teachers' attitudes towards the materials were also measured. Teachers completed paper-and-pencil questionnaires. Students were interviewed on videotape at the completion of the program.

Results indicate a high degree of acceptance and enthusiasm by both teachers and students. Both units will undergo minor revisions based on suggestions made.

How were materials such as these developed? The workshop portion of the presentation is a slide/tape presentation titled "Developing Art Instructional Materials for High School Students with Language Difficulties." Related directly to goal 6, developing a critical language, this presentation is designed to help teachers incorporate language into the high school art curriculum, and presents techniques for doing so in three general areas:

1. Readability levels.
2. Language difficulties (syntax, words with multiple meanings, elliptical constructions, and idioms).
3. Visualization of written material.

The slide/tape presentation includes audience participation. After each area is discussed (readability, language difficulties, visualization), the presentation pauses, and the audience practices the specific techniques using provided instructional materials. Thus, the participants actually measure readability, examine written material for potential language problems, and practice visualizing material to decrease reading difficulty.

This slide/tape presentation is one hour long, including work-time during the pauses. It is useful both for the teacher inexperienced in developing materials, and for those with more background. Examples in the presentation are taken from materials in the arts, but the techniques and suggestions can, of course, be applied to any content area.

A copy of the script is available on request from the Model Secondary School for the Deaf, attention: Jean Fulton.

For information about the art department, contact Barbara Petterson or Jay Tucker.

More information about research and test results can be obtained from Bill Grant.

"WHAT THEY SEE IS WHAT THEY GET!" AN INNOVATIVE APPROACH TO FAMILY SIGN LANGUAGE INSTRUCTION AT KDES

Dennis R. Cokely, Coordinator, Parent Sign Language Program,
Kendall Demonstration Elementary School, Washington, D.C.

With the ever increasing acceptance of the philosophy of total communication, most schools and programs are faced with a proportionally increased number of challenges to be dealt with. Among the most crucial of these challenges is how to provide the deaf child's family with sufficient skill in manual communication so that total communiction can become a reality in the home. In response to this challenge, Kendall Demonstration Elementary School has developed and implemented an innovative approach to family sign language instruction. What follows is a description of this program.

One of the major weaknesses in offering any form of sign language instruction to parents and other family members has been the question of accessibility. In most cases, such classes are held at the school itself which imposes a burden on the parents to arrange for transportation, hire a babysitter, and resolve any scheduling conflicts. The net result is that generally there is a high rate of absenteeism or only one member of the family attends the classes—usually the mother. In order to remove these obstacles, Kendall School's program is designed so that all instruction takes place within each family's home.

Each of the families involved in the program is provided with an instructor who conducts class on a day of the week and at a time chosen by the families themselves. There are several advantages to this approach: transportation difficulties no longer exist; babysitters are no longer needed; the rate of absenteeism is extremely low; all family members are involved in the learning process; familiar and comfortable surroundings facilitate learning; members of the deaf child's play group and peer group in the neighborhood can become involved in the learning process.

The involvement of siblings and peer group members in the learning process is not only an advantage but a highly desirable goal. In the child's interaction with siblings, he may learn patterns of social interaction which he will need at a later date to fully participate in the range of communication situations he will encounter. The deaf child also needs to function successfully in a variety of roles and positions in order to acquire and be able to generalize patterns of loyalty, helpfulness, competition, etc. This can only happen if there exists free flow of communication between the deaf child and his siblings and/or peer group members.

The basic goal of the Family Sign Language Program at Kendall School is to provide a framework for establishing communication between the deaf child and family (and extra-familial) members. Consequently, there is no insistence on the role of parents as language models for the deaf child. Although, this may be an eventual and ultimate aim and hope, unless there is a firmly established ability to communicate, the role of parent as language model is worthless. Modern communication theory posits four criteria for successful communication which must be satisfied before one becomes concerned about the role of language model: free flow of message, appropriateness of reply, efficiency of operation, and flexibility. The basic aim of the Kendall School Program is to provide family members with the ability to satisfy these criteria.

In order to most appropriately meet this goal, Kendall School has developed a set of forty-eight super-8 mm. film loops. Each family is loaned a super-8 mm. film loop projector as well as a complete set of these film loops. These film loops are advantageous for several reasons:

First, since most sign classes are basically courses in how to sign, not how to understand or read signs, these film loops provide each family with ample opportunity to develop receptive skills. In fact, the acquisition of receptive skills always precedes that of expressive skills. A student is never asked to produce a sign unless he or she can first understand it.

Second, most sign classes rely on the only materials available—books. The result is that classes are vocabulary-oriented, teaching signs in isolation, and not in context. The use of these film loops, however, makes it possible to see vocabulary used in context. This approach is in keeping with current second language learning principles and approximates natural language acquisition.

Third, in most sign language classes the amount of input a student is exposed to is limited by several factors, e.g., time, teacher fatigue, consistency, etc. Because each family has its own set of loops and its own projector, there is no limit as to the input. Each family member is free to view these loops as many times as needed in order for successful acquisition to occur.

Fourth, in most sign classes the students leave with the ability to read or understand the teacher's signing, but are unable to understand when confronted by someone with a slightly different signing style. The use of these film loops provides an opportunity to expose family members to a wide range of signers which helps to alleviate this problem. Currently, there are twenty-two different signers on the film loops.

Fifth, one of the most common complaints heard from those in sign classes is that most people sign too fast. The use of these film loops helps to solve that problem. Since the loops can be viewed as many times as necessary, there is, except for the first eight loops, no attempt to control a signer's speed. Since language learning is basically a skill of habit formation, the viewer begins to develop and form habits of dealing with speed in a non-threatening manner.

These comprise some of the major advantages of the use of film loops. It is necessary, however, to deal with the content and format of the film loops in order to gain a fuller appreciation of their value. Of the sixteen lessons in the Family Sign Program, twelve have accompanying film loops. Each of these lessons is supplemented by a set of four film loops. Of these loops, the first three are captioned (with the possibility of partially obscuring the projected image, thereby rendering the captions illegible) and the fourth is uncaptioned.

The first (and sometimes the second) film loops of each lesson contain short sentences or phrases, such as "I don't understand," "No, not now, later," "I don't want this," and "Where did you find that?". The second and third film loops contain stories written around a given context. All vocabulary is introduced through these film loops and the fourth, uncaptioned loop, which introduces no new vocabulary, serves as a review since it utilizes only cumulative vocabulary.

The course is designed to be "context sensitive," that is each lesson revolves around a specific topic, usually related to communication needs in and around the house. The following is an outline of the content of the film loops:

Lesson 1: Adaptive dialog—phrases needed to control the communication situation.
Lesson 2: General household and family member terminology.
Lesson 3: Continuation of Lesson 2.
Lesson 4: The kitchen and dining room.
Lesson 5: The play situation and school.
Lesson 6: The play situation and school.
Lesson 7: The bathroom.
Lesson 10: The living room.
Lesson 12: Fingerspelling.
Lesson 13: The bedroom.
Lesson 14: Student signing at KDES.
Lesson 15: Health services and general terminology.

The target vocabulary on the film loops is approximately 480 words. Deducting those film loops which do not introduce the target vocabulary—the "uncaptioned review films, four fingerspelling films and four student signing" films—the initial exposure of this target vocabulary is actually accomplished in 29 film loops or, stated another way, each loop introduces approximately 17 new lexical items. While this may seem a rather high per film ratio of new information, it must be remembered that there is virtually no limitation on the quantity of exposure or repetition available to the students.

A further integral feature of the program is dealing with the actual signing of the deaf child in the class. Since receptive understanding of the child's signing is essential for successful communication, three avenues of input are provided to class members:

First, an 8 mm. film loop of the deaf child signing a story is provided for class use. This enables the instructor to point out specific lexical items that the child is using as well as common patterns of signing that may occur. As with the other film loops, this may be viewed over and over again so that class members can gain a certain degree of familiarity and comfort with the lexical and linguistic structures of the deaf child's signing.

Second, the teachers are encouraged to constantly introduce alternate and variant forms of given lexical items to the class members that the child is likely to use or has used. While input here is limited, a pre-disposition or a mind set toward acceptance and recognition of sign variation is established among class members.

Third, four film loops (Lesson 14) are provided which deal with approximately 25 lexical items, idioms and patterns which are of high frequency among the signing done by students of Kendall School. While expressive mastery of these forms is not an expressed goal, receptive mastery is a stated objective.

One further note about the film loops—while they are designed to be used in connection with regular sessions with an instructor, it is possible to utilize them in a self-paced, self-programmed approach. While this is less than ideal, it may be the only practical answer to providing the quantity and quality of signed input needed for certain families to gain receptive mastery of signs.

During an orientation program and in subsequent meetings (instructors are required to meet with the program director at least once a week as a group), the instructors review the structured lesson plans for each of the sixteen lessons, develop specific materials, share common concerns and problems, and benefit from the experiences of the other instructors. These meetings are an essential step in translating the theoretical, on-paper program to the actual classroom situation.

The critical need which this program addresses is that of providing the means for successful communication to transpire in the home environment of the deaf child. To accomplish this most effectively, Kendall School is providing the means to acquire the necessary manual communication skills in a convenient, non-threatening manner. The basic goal is to involve all family members in the learning process so that the social isolation facing the deaf child is drastically reduced. This program—the film loops, scripts, and lesson plans—can, with appropriate modifications, serve as a model for other schools and programs which face the challenge of making total communication an effective reality in the total environment of the deaf child.

ART THERAPY AT KDES

Thomas Baker, Art Instructor, Kendall Demonstration
Elementary School, Washington, D.C.

THE PRELUDE

Samuel is a handsome, physically healthy, 15 year old boy. He is just beginning to open himself up to making friends. He comes to art class once a week for a forty-five minute period with three other boys his age. He does not particularly like art. Samuel's previous productions in art have been extremely rigid, stereotyped, and compulsive. Typical of his work is the Black Power symbol; red, black, and green sharing equal parts of a whole page. A one inch paint brush is overloaded with red and thickly applied. The other colors are done in the same manner. The line formed where two colors meet is never perfect enough. To correct it, more paint is applied trying to cover the "mistake". Instead, it becomes more smeared, ending in frustration for Samuel.

THE SETTING

It will be 15 minutes before Samuel comes to art. The room is quiet. I visualize Samuel attaining a goal I have set for him, a self-portrait. This is far above his present expression but a realistic long range goal. An easel has been set up in the back room with a large 3′ x 3′ piece of brown wrapping paper for the drawing surface. Pastels have been chosen to avoid the compulsion Samuel has with paints. I have prepared an introduction on expressions and feelings for him along with a drawing exercise. After this I will encourage the self-portrait.

THE ACT

The class arrives and the three boys begin their work. Samuel and I go into the back room. There, I begin showing Samuel pictures of people with various facial expressions. I explain the exercise but Samuel does not appear very enthused. He points to a picture of a woman who has an aloof expression. He selects a white pastel, steps up to the easel and begins to draw.

Near the top of the page a circle is drawn. From the circle come two lines resembling a body. "What are you doing?!" I think. Samuel begins to draw the eyes and other facial features. The breasts are added last with nervous laughter. He then joins the class in the main art room. An attractive young woman has come to observe the class which increases Samuel's nervousness. He becomes angry at me, telling me to shut up, when I try to communicate with him. Samuel alternates anger and nervous laughter, the remainder of the class.

THE REVIEW

This is a miracle! Samuel has drawn his first person! He is beginning to feel more like a person himself, therefore he can express the human form. Samuel has made tremendous progress! Although it is not a conscious self-portrait, it serves the same purpose. I would like you to try something now that you might gain a deeper understanding of Samuel's feelings. Stand up and place this book where you can easily read it without having to hold it. You are going to become Samuel's drawing (Picture 1.). Close your eyes and take a few slow and deep breaths, and we will be ready to begin.

Seriously, try this exercise. It will mean much more to you than if you only read it. Consider the entire picture as your environment. You are all parts of it whether it is drawn or left blank, and only those parts. Begin to focus on the figure. Take your time. Go slow. The head (without the facial features) and body are drawn in white. Forget about the face now and become the body. You have no neck. Squinch up your shoulders and remember that you cannot turn your head without a neck. Remain this way and slouch your shoulders a little forward. Now, imagine your arms being twice as large and as heavy as they are, and place them against your body. Your breasts are high and out of place. Forget about your hands, you don't have any. Neither do you have anything below your waist; legs, feet, sexual or elimination organs. Remain this way and begin to focus on the facial features. Your eyes are intense; they flash out. Your lips are an intense red, slightly pursed. Your hair is curly, alive on your head. Nothing else exists in your environment. It is blank. Now close your eyes and feel the entire picture in your body for about 20 seconds. Imagine someone next to you. Try to communicate with that person. Remember, you are deaf and you are not oral. Relax now. Think of the feelings you had while doing this exercise. How did you feel when you were only the body? What happened when the face appeared? Compare those two feelings.

Hopefully, this has given you a closer understanding of Samuel's situation and the supreme effort and courage he has displayed by his expression. Thank you for trying this exercise. Perhaps you will want to try it with the drawings, paintings, or sculptures some of your students have done. No doubt, it will give you a greater empathy with them.

Art, by its very nature, seeks self-expression. The self is constantly seeking growth. Therefore, art seeks to serve the self by helping the individual to grow. What action happens between an artist and his work? In drawing he faces a blank page, or himself. As he draws, he sees his own expression take form. It stares back. Like a mirror, it reflects aspects of himself. He must learn the balance between opening up and control. The self will come through no matter what, but balance is necessary for the artist to gain the most. Too much control stifles the individual. Too much opening up overwhelms the individual. In both ways growth is not efficient. Once the drawing is complete, it forces the artist to view it and react to it. When this takes place, the function of the drawing has completed its cycle. The individual then has to deal with that information consciously either by defending himself or by changing himself. In either instance it causes inner evaluation and movement.

Art therapy began at Kendall Demonstration Elementary School (KDES) in the 1974 fall as a child of the counseling program. Although some students had used art in a therapeutic way during arts and crafts classes, this was the first formal class for that purpose. Classes were held in the counseling room rather than the art room. The purpose of this was to establish the connection between art and counseling, to have a more controlled environment by working in a smaller room, and to establish a new working pattern which would be separate from art room patterns. Four students, ages 12–15 were the first participants. They had been referred to the counseling department because they did not cooperate with others. Classes met once a week for a 45 minute period in which the students would draw or paint. Discussion was informal as they worked.

Three of the four students were present for the first class. I explained we would be meeting regularly to draw and share our ideas together. This was a time they could use to draw anything they liked. Paper and pastels were passed out. Then, quite out of my control, the class became very quiet and involved in their work. There was an aura about the whole room which took me in as well as the students. I had originally questioned working with these students, as none of them responded particularly well in the regular art class. Whatever was happening, I liked it, and followed the example of my students by becoming quiet and involved. My role was to provide encouragement and praise for the students efforts.

Carver is a 15 year old boy who participated in this group. He looks and acts more like a 12 year old. He has good oral-aural skills. In the years I have known him, he has shown a deeper sensitivity than most children, both in joy and depression.

Carver becomes deeply involved in his work. I have never seen him so intent. He is apart from the group. He only relates to others during the session by physically responding to requests for colors. He makes no attempts to communicate with any of us. Carver seems to have an open channel to his inner feelings. He works slowly and carefully. (Picture 2a.). Carver has drawn what would be considered as a power symbol, or how he would see himself, but the result portrays a different feeling. The truck sits by itself in an empty environment. Unlike the title "New Trucks", it is old and beat up. There is no driver. If the truck were to move, it would roll off its wheels. The lines are drawn in a repetitive, back and forth movement. Little pressure has been applied to the pastel.

It is a very fragile piece of machinery. Being a dump truck, its function is to transport earth from one place to another. It is doubtful this truck would get far with the full load it carries. Carver has shown a desire to control himself, but his means are inadequate. The way he has drawn is in direct contrast to what he has drawn. This produces a surreal quality to the drawing.

We met again the following week. Carver becomes deeply entranced. He seems unaware of his surroundings. Strong images grow in his drawing (picture 2b.) beyond his conscious level. He seems unaware of the openness about him. He takes his pencil and begins to draw the tree on the right side of the paper. He works carefully and compulsively in repetitive movements. After the tree is finished he heavily colors in the trunk with brown, green, and blue. A few sprigs grow from one branch. The tree is firmly planted in the base although it has realized little growth. A balloon like shape grows from the top of the tree, and a face emerges. Then Carver uses red pastel to color two horns and a tongue. None of this seems to have reached a conscious level. Carver only looks up to choose his colors. The black tornado on the left side of the paper cuts deeply into the base. It is counter to the upward movement of the tree. The sun is drawn next to the tree, joining two life symbols. It sits on the horizon. Carver draws the cage over the tree and sun and begins to cover it with black. Then, he suddenly stops and folds the paper. He yells, "It mess up! Harold said it mess up! I heard you! (to Harold). You said mess it up!" He refused to sign his name and wanted to throw it away. Carver is very upset, angry, and depressed. It seems that he has just become conscious of what he has drawn to some degree.

Due to the vacation, a field trip, and a change in scheduling, we did not meet again until four weeks later. This time, Carver spoke about his picture as he worked (picture 2c.). He did not withdraw from the group as he had previously done. First the tornado and the base line are drawn. The tornado is not so threatening in this picture because it does not penetrate the base line, as the one in picture 2b. did. Carver draws a green diagonal shape to the right of the tornado. He explains it will hit and destroy the tornado. He is making a stand now, unlike in picture 2b. where the cage was covering the life forms. To the left of the tornado are a falling building and two stick figures. One figure cries for help but his hopes are dim, as Carver explains he is being riveted by machine gun fire and the building will soon crush him. Destruction is now being more specifically defined, showing Carver is gaining control. After the figure in the tornado is labeled dead, Carver names him another person as a defense. Then he uses pencil to draw the small car under the diagonal "green force". It serves as an escape from the picture as the pencil line disassociates it from the pastels. It definitely looks out of place.

These two pictures, 2b and 2c, fit together well. They give a sense of movement, or growth. If you can imagine an endless movie reel, it is as if we have taken two frames out for special observation. Although we can get a lot of information from the two pictures, they by no means can define a child, any more than two frames complete a movie. But by focusing on the growth or the movement through the pictures, we can begin to get a *sense* of the child. We also bring our focus upon a positive aspect, growth, rather than the individual events which might be considered negative. Looking at Carver's last two drawings, the events which occur in them are not too pleasant, but his growth is significant. Carver continued to progress well in the group. A change is programming terminated this group after two and one half months.

Iggy is a 10½ year old boy who participated in art therapy from January to June 1975. He was one of three members who started a new group. All of these students had difficulty in making friends. Iggy has made no real friends in his six years at KDES.

The counselors at KDES, Rudy Gawlik and Marlene McAleer, felt a discussion period would be helpful as part of the sessions. Discussion was incorporated and worked out to be a welcome addition. Because of scheduling, we did not have this opportunity with the group in the fall. A 45 minute art session was held first, followed by a 45 minute break, in which the students returned to class, and then the 45 minute discussion period. The break was necessary because of scheduling. One of the counselors directed the discussion.

During the first ten sessions Iggy fixated on drawing teasing pictures of Roland, another member of the group. Iggy needed to focus on himself, rather than on his teasing behavior towards Roland. Roland had reached the point where he needed new relationships and had the ability to adjust to them. Thus the boys were separated into two groups. Iggy is in his new group and continuing his old teasing patterns. Roland remains the victim, even though he is no longer in the group. In discussion, Rudy Gawlik places two pictures before Iggy at a time. Thus, Iggy must not only look at single events, but also their relationship to each other. Although Iggy still explains the pictures singularly, he is becoming aware of the movement through them.

The following week this is continued. In Iggy's first picture of the session (picture 3a.) he draws himself and Roland swimming together. We play act the event. It is emphasized that they are friends. In the next picture (picture 3b.) Iggy explains he is swimming and he is happy. Roland has no swimsuit. He is crying. We play act this event also. "Are you friends?" we ask. Yes is the reply. Iggy looks at both pictures intently. We emphasize being friends again, and Marlene McAleer writes "FRIENDS" across the page of the first picture (3a.). Normally, this would never be done to a student's art work. It was a spontaneous act on our part to communicate with Iggy. He accepted it fully. Again, we ask if he is friends in the second picture. Again he replies, yes. Instead we write "NOT FRIENDS" across the page. Up to this time, Iggy has seen teasing as part of friendship, therefore, he could not separate it out. "FRIENDS" or "NOT FRIENDS" is written on each picture as we go through them. By the last picture, Iggy is correctly titling them himself. He is seeing cooperative relationships as friendship and teasing as not being friends. This is a major step for Iggy.

The next week, Iggy realizes that Roland is no longer a member of the group. He transfers his teasing pictures to a new member of the group. In one picture (picture 3c.) he shows himself as a stick figure on the right. He explains that he hits Liza, center, who then falls down against the tree, left. Instead of looking at the event, we bring Iggy's attention to the way he has drawn the figures. It is pointed out that Liza has a body and he does not. In each of the pictures of this session, it happened that Iggy always drew himself as a stick figure, and always drew other people with bodies. Iggy reacts strongly, "I have a body. Yes!" But at the same time he is able to see the inconsistency in the drawing before him. He is forced to reflect upon himself rather than hide behind his teasing behavior.

Each of the students mentioned, Samuel, Carver, and Iggy, used art as a means to express or release inner feelings. Their reactions to their work included frustration, anger, fear, nervousness, depression, confidence, security, pride, control, enjoyment, and many others. It provided an important alternate means of communication for these students.

Total communication is a popular phrase now in the education of the deaf. Self-expression in any form is definitely communication and definitely helps to make up the total child.

AFFECTIVE DOMAIN—EFFECTIVE EDUCATION

James Achtzehn, Instructor, Department of Education,
Gallaudet College, Washington, D.C.

Designed by doctoral fellows from the Educational Technology Program for Educators of the Deaf at Syracuse University, this three screen presentation, "Affective Domain—Effective Education", attempts to employ media for affective learning. Since it is difficult to communicate the message and the impact of a multi-media presentation in print, this paper will describe the goals as perceived by the designers, the behavioral objectives for the observers, the approach, and the script along with a brief description of the visuals.

Goals of the presentation

This multi-media presentation explores the three domains of behavior—cognitive, psychomotor and affective—with emphasis on the affective domain.

The goals of this presentation, as perceived by those who designed it, are: (1) To introduce the observers to the Affective Domain; (2) to place the Affective Domain within context of the Cognitive and Psychomotor Domains; (3) to integrate the three domains; (4) to translate the concepts of the Affective Domain into real situations; (5) to stimulate an affective experience through the media presentation; and (6) to motivate further discussion into the area of the Affective Domain and its relationship to "Affecting the Human Potential of the Deaf Student."

Behavioral objectives

At the end of this presentation each observer should be able: (1) To describe the affective domain in writing, oral, or manual communication using synonyms and examples; (2) given an array of activities to identify affective behaviors, cognitive behaviors and psychomotor behaviors; (3) to describe ways in which a teacher of the deaf can behave affectively; (4) to seek out and scan the *Taxonomy of Educational Objectives, Handbook II: Affective Domain* by Krathwohl et al.; and (5) to demonstrate satisfaction with the presentation by responding affectively with applause at the end of the presentation.

Approach

The designers of the presentation assumed that the affective domain as a category is artificial as are the cognitive and psychomotor domains. It is for convenience of organization that we look at affective behaviors realizing that they are not clear cut and divorced from other behaviors.

The designers found almost no research which positively related strong affective responses to verbal stimuli and therefore felt that a presentation which introduces the affective domain ought to provide the best example of affect and this could not be accomplished with words.

In an attempt to present the cognitive, psychomotor and affective domains, a script was prepared using a metaphor to convey the content. The script that follows is isolated and the description is necessarily brief. Therefore they should not be judged as the total content of the presentation.

Script and description

This is the land of behavior. Delightful, isn't it?

It is governed by a kindly king, Affectus II.

The inhabitants interact with one another, performing all types of skills and behaviors.

A montage of pictures depicting scenic views with people interacting and performing all types of behaviors.

But legend has it that things were not always so delightful and peaceful.

Many hundreds of years ago, this valley was divided into two domains—the cognitive and psychomotor.

It was an unwritten law that people from one domain would completely ignore the other domain, not even noticing their behavior.

A montage depicting two separate groups of people. One group performing cognitive type behaviors, the other performing psychomotor type. Both groups ignoring each other.

The cognitive people, thinking only that cognitive behaviors were important, did only mental things.

The montage continues with the psychomotor behaviors frozen. The cognitive people continue interacting among themselves performing cognitive type behaviors.

The inhabitants of the psychomotor domain, believing that only psychomotor behaviors were important, did only physical things.

The cognitive behaviors freeze and the psychomotor people continue interacting among themselves performing psychomotor type behaviors

Then one day Cognitive saw Psychomotorus. Although they were forbidden to even notice each other, they instantly fell in love. In time a son was born to them—Affectus I.

Affectus I grew up. He could travel freely from one side of the valley to the other.

It was not long before the people in each domain began to receive or attend to the people in the other domain.

Soon they were responding to behaviors from the other domain.

In time the inhabitants of each domain began to value or believe in the other's behaviors.

Eventually the people began organizing their values.

Finally the inhabitants reached the ultimate level of characterization. They began revising and changing their behavior in light of the other domain.

A montage depicting the two domains beginning to interact and developing affective behaviors through the five stages of: (a) Receiving; (b) Responding; (c) Valuing; (d) Organizing; and (e) Characterizing

At last the old taboos and restrictions were removed. The two domains began interacting, and they made Affectus I their new king.

A final montage depicting people once again interacting and performing behaviors in all three domains

This multi-media presentation was created for and originally presented by Dr. Donald P. Ely at the 1972 Symposium on Research and Utilization of Educational Media for Teaching the Deaf, "Affecting the Human Potential of the Deaf Student: Another Role for Educational Media", sponsored by the Midwest Regional Media Center for the Deaf, University of Nebraska. Since then it has been presented a number of times at various workshops and meetings in such places as the American School for the Deaf, Hartford, Connecticut; Syracuse University, Syracuse, New York; The United Board for College Development, Atlanta, Georgia; and Gallaudet College and Kendall Demonstration Elementary School, Washington, D.C.

The doctoral fellows responsible for developing the presentation were: James Achtzehn, Adoracion Alvarez, Barbara Bodner, John Butler, Robert Davila, Rodney Gould, Victor Lisnyczyj, James Mangan, Ronald Nomeland and Paul Peterson.

THE STUDENT TEACHER LEARNS

Audrey Simmons-Martin, Ed. D., Central Institute for the Deaf,
St. Louis, Mo.

The importance of the teacher in our Parent-Infant Program was recognized when we began in 1958 at Central Institute for the Deaf. At that time, we did not possess the knowledge and experience we have since accumulated. We made no attempt originally to select teachers possessing certain skills which we could have specified *a priori*. We just chose teachers of the deaf with all the competencies that C.I.D.'s Teacher Education two-year foundation courses offered. This included an understanding of human growth and development (albeit including the child only from age three years on); the limited knowledge that was then available on ways young children learn; understanding of hearing, hearing loss and amplification; and comprehension of speech and language teaching.

We felt then and still do that teachers should have certain personal qualifications. These characteristics included:

1. A basic liking for people.
2. An understanding of family life.
3. Empathy for parents of handicapped children.
4. Ability to accept parents at whatever level they happen to be.
5. Capacity for continual growth.
6. Flexibility.
7. Intellectual curiosity.

It is interesting that similar qualifications are described today for effective teachers in Day Care or Home Start Centers (11). However characteristics varied from teacher to teacher as did the teaching style. So the strategies varied among the staff. Some commonality was achieved through frequent staffings and informal discussions and as time progressed, we tended to present a unified philosophy.

The teachers we selected at the inception of the Parent-Infant Program were also parents of young children. Intuitively, we seemed to realize that a thorough knowledge of family living was vitally important. As I recall, one of the staff pretended for a time that her own baby was deaf and experienced for herself some of the difficulties the parent might encounter. Implementing in her home the strategies she wanted her mother-clients to utilize daily in their homes was found to be most taxing.

Our rather simple approach was probably appropriate for the fifties but as time has rushed forward we have learned much. We found as we proceeded that there were numerous areas in which we needed knowledge leading to competency. Our growth in the understandings of the teachers' role came in spurts, some in rapid succession, others over a prolonged time.

We could no longer enjoy a simplistic linear approach to understanding behavior of young children. To our chagrin we discovered complex internal and external forces that reciprocally influenced child development. There were no easy answers nor mere dichotomies to the educational task. It was not what words to teach nor what communication method to use. There was none of the complacent acceptance "you must be right, you are the teacher." Rather there were entirely new roles emerging for the teachers. It was the teacher teaching the parents. She was a modeler, an explainer, a consultant to adults. She was an activity director who gave ideas to sometimes bewildered and unsure parents. The child's development was not dependent upon her, the teacher. Instead it was dependent upon the parents as teachers, a role which the teacher might have to demonstrate, model, teach the parents.

As we moved into the sixties, vast knowledge became available that was pertinent to what we did and how we did it. Foremost among the findings of that period was the discovery of the baby. Researchers became aware that children were not dormant organisms who did not "awake" until past their third birthday. Rather, infants benefited or suffered as a result of their earliest experiences. In place of sterile environments they needed quality stimulation during their earliest months. The early research which contributed to this important body of information was from animal laboratories. With puppies, kittens, primates and rats, researchers were convincingly demonstrating that environmental (9) maternal (4) and sensory (1) deprivation during the critical infant periods were producing serious negative effects in the animal.

Shortly thereafter, other investigators like Bowlby (3) and Bernstein (2) reported analogies with children raised in barren surroundings. The urgency of early and stimulating experiences was clearly indicated. Maternal deprivation was described and compared also to animal study results. At first it was believed necessary for the real mother to provide the necessary experiences for the developing infant. Now, however, it is more the experience itself that appears to be critical rather than the person providing it. The successful provider may be either parent, grandparents, a sitter or good day care givers. The giving of experiences that lead to cognitive, social, emotional and linquistic development is the primary role of parenting. Probably the best description of the parenting role comes from the Harvard laboratories. White (14) has evidence that the super mother packages these important and critical experiences into the period between the child's learning to crawl and his second birthday. All care givers, he thinks, function similarly up to the child's eighth month but during those next few months is when the superior ones make a difference. Teachers may feel that it is they who can and do have the greatest impact upon the intellectual and linquistic development of children but White's findings point emphatically to the mother or her surrogate.

While maternal and environmental studies have meaning for everyone working with young children, the sensory deprivation studies have particular and serious implication to those of us concerned with hearing impaired infants. We can only draw the implication that the effects of visual deprivation are analogous to those of auditory deprivation and that information unquestionably pressures the issue of early amplification and auditory training. A study of Elliott and Armbruster (5) supported the frightening conclusions that amplification delay has serious and negative influence on the hearing impaired child's auditory perception.

The body of information continued to build as we moved into the seventies with the linguists giving us tools to look at language and the psycholinquists using them to analyze development. We are still digesting all that has been researched, theorized and disputed about childhood language. Some told us language development was innate, others said it developed through reinforced imitation. Still others felt transformations and rules were generated by induction. However, after observation and monitoring of hearing impaired infants, toddlers and preschoolers, we have developed our own eclectic theory (12). We are convinced that these children need the input that developmentalists are currently calling "motherese." The task is to get parents to use it and to see that the child receives it.

The whole area of language input has received disproportionately little attention during this time. There has been little in the literature about the relation of input to output, comprehension to production or reception to expression. There is a tacit understanding that comprehension precedes spoken language but by how long or how much is necessary is not really understood. There was a compehensive paper on the topic of Receptive Language Development in Infancy (7) that concluded that:

> The whole process of learning to listen is not merely a passive stage of growth but an immensely dynamic and energetic enterprise that calls upon the highest capabilities a child can mobilize in adapting to the challenges of his internal and external environment.—p. 49

Much of the knowledge gleaned over the last two decades is important for a student teacher preparing to teach at any level. But when the pupils are parents, the teachers' competencies must include being able to rephrase all of the information within the parents' comprehension. At the same time, the teachers cannot forget that they must neither talk over the parents' head nor below their capability. With the idea that from birth to at least three years, the parent is the pupil, it is not by accident that the Council of Education of the Deaf has divided the pre-primary level into two sub groups.

a. Infants ages birth to three and who may receive education in a variety of settings.

b. Nursery, ages three to six in a school setting.

There is a clearly defined difference between the training and skills necessary for effective work with infants in the home and toddlers in classes. The certification requirements have not yet been expanded to point out the added content needed for professional specialization in the pre-primary level.

The time allowed for this paper is not sufficiently long to go into the large amount of information assimilated in the past decade about amplification, hearing in the low frequencies, prosodic and time envelope information, accompanying taction, and much more. Erber (6) has contributed much to this portion of knowledge and we are fortunate to share his findings first hand with him.

Deprivation and its effects, psycholinguistics, psychoacoustics are only a few disciplines which have overwhelmed us with evidence leading to revised theories and to other entirely new ones. Nevertheless, they should indicate the vastness of the bodies of information now available to student teachers from which he/she develops a firm theoretical base.

However, we still feel that the basic assumptions we had in our start-up efforts must continue to be interlaced with the later research. Our experience certainly gives substance to wise use of common sense as a fundamental approach. Teaching parenting did then and still does require all the characteristics of talents we originally requested from staff.

In her analysis of needs of teachers of hearing impaird infants, Northcott (10) identified 77 competencies and grouped them under five major areas of professional responsibility.

1. Development of communication.
2. Physiology, audiology and acoustics.
3. Curriculum.
4. Home-school-community relations.
5. Psychological and sociological factors.

She reported that teachers and experts generally agreed that a teacher should:

1. Function as a member of an interdisciplinary team serving the infant and his family;

2. Furnish a continuing program of parent guidance, counseling, and education;

3. Use an aural (listening) and oral method in providing a dynamic program of auditory training and language stimulation as well as an experimental, inductive approach to learning;

4. Provide educational experiences with hearing children;

5. Have knowledge of the stages of languages acquisition in young children and the techniques and materials useful in teaching the "normal" infant; and

6. be able to speak clearly and use interesting intonation patterns.—pp. 536–537

A recent conference on personnel preparation for education of bilingual hearing impaired children was summarized by Grant (8) who reported that the conference focused on four general areas in which students needed to be proficient. As the list indicates, there was more than a general concern with teacher competencies in relation to a family. The areas and the subtopics were as follows:

A. Early Childhood Development. Knowledge of: (1) Sensory motor development; (2) Social, emotional, and personality development; (3) Language development; (4) Cognitive and perceptual development; and (5) Creativity in children.

B. Teaching in the Home. General Knowledge of: (1) Family structure and relationships; (2) Parent/child relationships; (3) Sibling relationship and peer relationship; (4) Optimizing development of creativity; and (5) Behavior modification techniques.

C. Society and Culture. Knowledge of: (1) Socio-economic factors affecting the family and the community; (2) Religion of the family; (3) Family structure; and (4) Health practices of the family.

D. Deafness. Knowledge of: (1) Implications of hearing impairments and auditory imperceptions on: (a) language acquisitions; (b) cognition; and (c) adaptive behaviors. (2) Basic concepts of the speech and hearing mechanism and their functions; (3) Techniques of stimulation and utilization of residual hearing. (4) Various methods and techniques of developing language for the hearing-impaired. (5) Additional handicapping conditions: (a) visual; (b) mental retardation; (c) cardiac; (d) motor; (e) neglect; and (f) etc.

Statements like "knowledge of family structure and relationships," "furnish a continuing program of parent guidance, counseling, and education" and "the ability to utilize educational, sociological, audiological and psychological information in educational planning and counseling for children and their parents" may be too general for the casual reader.

The student needs the content implied in those statements but there is much more involved in being a counselor, a teacher of parents of the hearing impaired than those phrases would indicate.

Even though the tasks are similar—all speak toward teaching parenting—it must be emphasized that dealing with parents of handicapped children is unlike dealing with parents of normal children. The former experience reaction to learning about their child's handicap with all of the accompanying manifestations; feelings of inadequacy, being overwhelmed by the complexity of the problem, anger, and all the responses of reacting to the shock of any disaster (13). If the parents are also inept at parenting, teachers must bring many other skills to the task.

Now in a period of accountability, what competencies do we need for teachers? That is the assignment of this paper. Certainly we want a student competent in the areas described as the foundations in C.E.D. certification requirements. In addition, we want the student competent in the areas we have talked about above. There are a few items we have not touched upon which would also need attention such as some ability in group dynamics because group discussions should be an avenue open to parents for ventilation and information exchange; some ability in crafts because the teacher needs to guide parents in utilizing inexpensive items for stimulation—children learn much through play. It helps if the student knows a little journalism too because communication needs to go out to parents. We do it in the form of a newsletter.

The trainee needs to be involved with children of all ages in order to know outcomes of the treatment. The student also needs to participate in the Home Demonstration Center with the children and their families as practicum experience. Depending on the students' career goals, participation varies, but every student plans for two parent meetings and does an analysis of one video taped longitudinal sequence of a family. For those students whose interests rest in early intervention, effort is extended to see that they take part in the interdisciplinary discussions. For them too, practicum experience is provided with families in the Parent-Infant Program.

In addition to the use of teacher models, trainees have the opportunity to observe their own behavior on video tape for critical evaluation and professional development.

As part of the content of the students' curriculum, assignments include conducting a parents meeting, planning a session for a family, analyzing materials given parents for supplementary reading and reviewing compensatory programs focusing on parents.

A bibliography on topics such as parent involvement, general reading for parents, "cookbooks" for parents, parents and language development, parents and deaf children, and counseling is given for the trainees for reference and use. Some students have participated in the preparation of video tapes in an area of particular interest to them. It is anticipated that more may do this type of work as part of their independent study.

Part of the outreach aspect of our Bureau of Education for the Handicapped grant has been to develop materials for pre and inservice training. Some of the materials shown at this meeting are part of the collection. Facets of class teaching are on slide/cassette media. These and the video tapes are available through the Volta Bureau.

Thus the student learns through media, courses, seminars, practicum experiences. He learns a new role for the teachers. He acquires a theoretical framework for his activities. He learns to assimilate the findings of research into his own theoretical constructs and day to day activities. He becomes emerged in an interdisciplinary approach. He develops skills to plan with the parents for stimulating experiences for their children. He becomes competent in seeing that complex interactions transpire between the child and his environment.

BIBLIOGRAHPY

1. Barnet, A. "Biology of sensory deprivation," in *The Young Deaf Child: Identification and Management*, Acta-Oto-Laryngologica, Supplementum 206, 1964, p. 214.

2. Bernstein, B. "Social class and linguistic development: A theory of social learning," in *Education, Economy and Society*, edited by Halsey et. al., New York: Free Press, 1961.

3. Bowlby, J. *Maternal Care and Mental Health*, Geneva, Switzerland: World Health Org., 1952.

4. Casler, L. Maternal Deprivation: A Critical Review of the Literature, *Monogr. Soc. Res. Child Develpm.*, 26, #2, 1961, 1–64.

5. Elliott, L. & V. Armbruster. "Some possible effects of the delay of early treatment," *J.S.H.R.*, 10, #2, June 1967, 209–224.

6. Erber, Norman. "Amplification and the Development of Communication Skills By Deaf Children," presented at a conference on Extended Low-Frequency Amplification and the Deaf Child, June 17–19, 1974, White Haven, Pa.

7. Friedlander, B. Z. "Receptive language development in infancy: Issues and problems," *Merrill Palmer Quarterly*, 16, 1971, 7–51.

8. Grant, June. Proceedings of a Workshop on the Preparation of Personnel in Education of Bilingual Hearing-Impaired Children Ages 0–4, Washington, D.C.: HEW, 1972.

9. Hunt, J. McV. *Intelligence and Experience*, New York: Ronald Press, 1961.

10. Northcott, Winifred. "Competencies needed by teachers of hearing-impaired infants, birth to three years, and their parents, *Volta Review*, 75, #9, Dec. 1973, 532–545.

11. Seefeldt, Carol. *A Curriculum For Child Care Centers*, Ohio: Charles E. Merrill Pub., 1974.

12. Simmons, A. A. "Language and Hearing" in *Speech For the Deaf Child: Knowledge and Use*, edited by Leo E. Connor, Washington, D.C.: Volta Bureau, 1971, 280–295.

13. Simmons-Martin, A.A. "A Demonstration Home Approach With Hearing Impaired Children," in *Approaches With Parents of Handicapped Children*, edited by Elizabeth J. Webster, (in press).

14. White, Burton & Jean Carew Watts. *Major Influences on the Development of Young Child*, Engelwood Cliffs: Prentice-Hall, 1973.

THE CHILD LEARNS

Phyllis Britt, Central Institute for Deaf, St. Louis, Mo.

When most people learn that I am a teacher/counselor in a program in which hearing impaired babies are enrolled as soon as a hearing loss is suspected, no matter at how early an age, their first reaction is to ask, "But what can you teach a tiny baby?" "What can he learn at such a young age?" True, we can't teach a baby much in an hour session once a week, such as we have at Central Institute. Nevertheless, we can, through suggestion and example guide the parents in their relationship and activities with their babies, so that through them their child will learn. We feel that little children learn best through their parents because of several factors;

1. Parents can know their child better than anyone else. They can best learn his interests and capabilities;
2. Parents are usually available 24 hours a day, seven days a week. Therefore, they can be there when the child's interest level is high and when he is feeling happy. The child probably will be cooperative and "ripe" for learning at those times;
3. Parents usually are present whenever a situation that will be fun to learn about arises in the child's surroundings;
4. The parent is available for constant repetition about the articles and happenings that are important and therefore interesting to a child. These are advantages a classroom teacher never has.

Our families are seen on an individual basis because every situation is different. Just as it is true that each child is different, so it is that each parent is different. Each one has his own unique personality, intelligence and capabilities. So we try to teach the individual parents to observe their own child's reactions, to know him, to relate to him, and to manage him. The ways then, will be those best suited to each parent-child unit.

As our goal at Central Institute is to teach aural/oral communication, the next question may well be, "Can you teach a young deaf child to understand language and to talk?" Certainly, because we believe that learning language is more, much more, than being able to say words. It is wanting to receive, express, and share feelings, ideas and interests. This is what language is truly all about.

Therefore, parents can begin immediately, no matter how young, or old the child may be, to share with him the communication of love just through their closeness, their smiles, their gentle "love talk," their singing. We help parents learn to watch their child, and when he looks, we do try to make looking profitable. We teach the parents to say something. Eventually, the child will learn to look at the speaker often, or automatically because it has been a meaningful experience.

He will learn that some message or communication is coming from that face. When the child vocalizes, as all children do, we teach parents to vocalize in return, thereby letting him know that his verbalizations are all important. When our babies are interested in a light, their hands, a bird, we demonstrate to the parents how to show interest in those things and to talk about them. As our older children develop different interests, parents are encouraged to follow these. We try to observe and discuss with our parents every step of their child's development so that they can, in turn, show acceptance, approval, joy, and can talk appropriately about these new interests and achievements. This is why our program is an on-going program. We think it to the parents' and the child's best advantage to meet with us regularly in order that we might teach the parents to observe and take advantage of each new development, as it occurs. This can be done in a one-to-one situation on a weekly, or however feasible, basis. So, initially, we are asking and teaching the parents to feed language into their child. We are asking them to "surround" the child with talking; to give him adequate "exposure" to language. In this way, hopefully the child will achieve through the parent, these first all important steps in language development of "awareness" of talking and of "perception," that is, attending to "talking" by watching and listening.

As the child matures, and seems to be feeling happy about himself and aware of his world and the people around him, we can move on to more specific language input. We can teach the parents to label all the objects their child sees and uses everyday. For example, when dressing, they can say,

"Let's put on your shoe."
"You have pretty shoes."
"Let daddy tie your shoe."
"Now get your shirt."
"There's your shirt."

The parents can learn to talk about all the everyday activities the child participates in with them around their own home. For example, we suggest to our parents that at every meal all the language connected with the feeding process be used.

"Here's your cereal."
"Your cereal is good, yumm."
"Oh, oh the cereal is hot!"
"Now eat your toast." etc.

As the child's motor skills develop, there is more talk.

"Come on, crawl to mama."

or, "Walk over and get your teddy bear."

As he develops feelings about people and situations, the parents talk about these too.

"We're at grandma's house."
"I love grandma."
"Are you happy to see grandma?"

When language is associated with the tasks a parent does with a child everyday, sometimes three or four times a day, the baby learns the language. He wants to learn it and eventually to share it with others. We would hope that eventually the child will learn, first through the situation and then specifically, that when his mother says, "Let's get dressed, get your shoes," he will go and get his shoes. He will also then begin to imitate what his parents are saying. The vocalizations he has been making all along will begin to take some form and an approximation of the word will come.

Perhaps, as in the case of "shoe," he will say "oo." As the correct pattern is constantly repeated by the parents, the child's imitation will improve in intelligibility. Then the word will become his own, one he can initiate rather than just imitate. Needless to say, the day he calls, "Mama," when he wants that all important person in his life, happiness beyond description is brought into a lady's life!

As the child is constantly exposed to language, his single words will have others added to it by the child as with "Put on your shoe." He may say, "Pu aw oo." Then in time, the words become more accurately said and hopefully inflection, or intonation is imitated also. Some of the "older" children, those 3½ or 4, who have been in our program for a period of time are using phrases on their own.

"Get up." "Open the door." "I want a cookie."

Parents have been taught how to expand their children's language once understanding of a few things is apparent and once a few words are initiated. It might be well to note here, that at no matter what age children enter our program, they have to pass through the same stages in their development of learning receptive and expressive language.

Children also learn through their play. They learn to express themselves, to explore their own particular interests, to satisfy their curiosities and to see the results of an act, as when one too many blocks is placed on top of a stack. Through play a child can learn to express his feelings, and also to imitate what he has seen others do, such as scolding a naughty dolly! Imitation, that all important facet of learning!

Through exploring, a child learns. From the time he can pull himself to his feet to where he can get a different "view" of his world, crawl to new and different locations, walk to even farther, and perhaps more dangerous spots, a child is finding out about things. And, if parents are made aware of the value of a child's curiosity and exploring, and can be aware that it's a necessary part of child development, even though sometimes dangerous, they can be taught to encourage this exploring, protect their child from harm and also to give language appropriate to the child's activities.

A child learns through books. A child, at a very early age can be taught many things by his parent looking at books with him. The parent can talk about the pictures, label the objects in the pictures, and can tell the sounds various objects in the pictures make, thus exposing the child to various auditory stimuli. They can imitate what people in the pictures are doing, and eventually, the parent can teach the sequence of a story or happening. Later, a short story can be told. Children learn through hearing nursery rhymes, too. They learn them through repetition of the words and of the rhythm. Our parents are asked to sing, say and act out nursery rhymes and songs. Some of the older children can identify them and even attempt to say or sing some of them.

Through a scrap book, a child can also learn many things. After all, what is it that an ego-centered child would enjoy more than a picture of himself pasted in a book—his book! He can learn that pictures represent real persons and objects. He can learn that symbols have meaning before words. Their books might contain pictures of the members of their family, their friends, foods they like, clothing they wear, and animals they have come in contact with.

A child learns through the experiences that their parents make available to them and share with them. Children must be given an opportunity to explore their home, their neighborhoods and to learn about their neighbors. There is a great need for little children to be exposed to people other than their immediate family. It is through this experience that children learn about people and about establishing relationships. Even a young child can learn that he can relate to others and establish a healthy social attachment through his smiles and vocalizations.

A child learns through experiences in exploring his town or city so that he has much to think about and eventually to talk about. Children like to share their experiences and knowledge. They can learn to do this through the making of experience scrap books before they have sufficient language to do so verbally. Our parents are encouraged to make many excursions with their children and to visit all places of interest in their community. We discuss such excursions and which ones are appropriate for what age child. Places such as the zoo, a fire station, a ride on a bus, a picnic—there are endless possibilities if parents seek them. They are urged to record these activities with their child, in a scrap book. These books can be as elaborate, or as simple as the parent wishes to make them. She may take photographs, use pictures from magazines and books, or draw simple stick figures. If this is done as the activity takes place, they will have real meaning and can be used for sharing, re-living the event and the recall of specific happenings.

Children, even deaf children, learn by listening. If parents are taught to point out consistently, the sounds in their baby's environment, to indicate the source of those sounds, to train him to listen to their voices, their inflection and intonations, a new dimension of language is learned. The teacher/counselor, consulting with the audiologist, can teach a parent how his child can learn to listen with a hearing aid. Our parents are taught the use and value of hearing aids and how to take care of them so that they can teach even a young baby to use his aid.

Quite often we see multiple handicapped children in our program. We attempt to counsel and teach these families if a hearing loss seems to be the child's primary handicap, or if the parents choose to remain in our program. If not, we help direct them to a more appropriate placement. The child and parent are seen on a regular basis and given the help we feel will benefit them. In the case of the child who has the additional disability of poor vision or retardation, he can be encouraged to develop self-help skills and any language skills he may be capable of accomplishing. In many cases, much can be done with auditory training. The child may be made aware of sound, the presence or absence of it and how to localize it. Perhaps he can be made aware of speech and give it his attention. Being aware of his own vocalizations and learning that they can bring responses can be an important accomplishment. Here again, attention is given to every phase of the child's development as it happens.

Children do begin to learn from the day they are born. Most researchers feel that the most important years for learning are before the age of three years. So, we are delighted when a baby and his parents enroll in our program. We try to guide his parents giving them the understanding, help and knowledge they need about their child. We want this so that the child will learn the many important things that come before, but are essential to, the ultimate goal of learning to understand, to think, to share ideas and feelings through aural/oral communication. We hope that this "parent delivery system" or parent involvement, will continue throughout the child's learning career. Even when the child is enrolled in a full-time school program, we would hope that his parents are always aware that through them their children will continue to learn and to grow.

PARENTS LEARN WITH THEIR CHILDREN

Rose-Marie Smith, M.E.D., Central Institute for Deaf, St. Louis, Mo.

Another component of the Parent-Infant Program is the nursery classroom experience. The purpose of the classes is to further the child's social, emotional, cognitive and linguistic development readying him for school. For the parent, the classes provide another opportunity to observe and experience higher levels of learning in their own and other children. Observation and teaching helps the parents prepare themselves for their child's eventual enrollment in daily classes.

The nursery classes are deliberately small with maximum enrollment of six. Since some of the children are also enrolled in nursery school with hearing children, the classes in the Parent-Infant Program do not meet daily. For the same reason, these classes meet in the afternoon.

Parent participation

By participating in class activities parents can learn to understand their own child and other children in a class setting. The parents thereby can realize their responsibility for their own child's total growth. By being a part of the programming with a regular teacher they can supplement the school's endeavors more effectively at home, throughout the child's learning career.

Our immediate goals for the parents are:

1. That they look more objectively at their child than they can at home;
2. That they become familiar with their child's total social, physical, emotional, cognitive, and languistic development;
3. That they move towards increasing initiative and independence in planning the educational stimulation for their child;
4. That they achieve consistently firm but affectionate handling of the child in a variety of situations;
5. That they become alert to ideal opportunities, not only for the development of communication skills, but also the total integrated development of the child; and
6. That they appreciate the importance of creativity in cognitive and linguistic growth to the extent that they serve as a continual catalyst.

Our longer range goals are that the parents can:

1. Modify the child's environment for his maximum development;
2. Set realistic targets for achievement in their child;
3. Select the types of education which give the child optimum opportunity for development;

4. Appreciate and understand the present educational tasks and those ahead;

5. Be intelligent and participating parents as their children continue in school; and

6. Maintain the important stimulation throughout the child's school life.

Parent participation takes several forms in the nursery component of the Parent-Infant Program. It can be directly related to ongoing class activities either through interaction with the children or observation of them. They also participate in the formulation of future class plans and in conferences with the teacher.

It is interesting to observe that parents need to be taught to be good observers. In our program the observation room adjoins the class and when a parent is not participating in the classroom he is observing through the one-way mirror, which helps reduce the adult to child ratio within the room.

The parent is to remain an active observer. There may be observation guidelines given to the parent or he may be asked to take notes for later discussion. These observations contribute to the parent's objectivity.

When the parent is not observing she is participating either as an aide or as the teacher. As an aide, she reinforces the activities of the teacher, provides language models, and stimulates social and verbal interaction with the children.

After they have learned about the class program, parents participate in the classroom teaching on a rotating basis. The parent actually assumes the role of teacher. She plans the experience, provides the materials and conducts the lesson.

Meetings

Meetings about the classroom activities are frequently group meetings. They focus on learning to plan new challenges and to evaluate the existing opportunities for their children. The meetings are informal and parents make impromptu suggestions to each other. Sometimes they are led by the teacher, who offers positive direction which in turn stimulates more parent interaction.

The teacher usually confers weekly with the individual parent about her child's activity in the classroom. She also meets weekly with the parent who has participated as a teacher during the week.

Classroom activities

We can take a look at one of the typical activities a teacher would be doing in the class and see the generalizations the parents need to make about the intrinsic learnings. Suppose the project is making kites. The parents need to observe that the children are:

1. *Making choices—decisions.*—Each child must select the color he wants for his kite.

2. *Learning colors.*—Colors are being presented to a child in a meaningful way.

3. *Labeling.*—The kite, the paper, the tail should all be correctly labeled initially.

4. *Learning to make comparisons.*—The kite tails are different in length and the children note this.

5. *Learning numbers.*—The children count all the kites.

6. *Learning identification.*—The children are beginning to recognize their own names.

7. *Improving motor skills.*—Children paste, cut and perform whatever fine tasks are involved in making a kite.

Some concepts grow over a period of time and parents need to observe that. For example, the teacher wants to put across the properties of water. Labeling "water" only when the child drinks is insufficient experience for a child to learn its characteristics. Therefore, the teacher may provide many opportunities for the class to have water related activities and she helps the parents to make the appropriate generalizations about them.

ACTIVITY	PURPOSE
Water has no shape but fills space, therefore the teacher may fill various shaped containers.	This starts the children on conservation, the same quantity of water will partially fill some objects and overflow others.
Water freezes—so the teacher may make popsicles.	This helps the children see that water becomes solid when frozen.
Water changes some solids into liquids, so she added water to sugar sometimes, gravel at other times.	Helps children learn that some substances like sugar dissolve in water but rocks cannot.
Water is used to cleanse, so the class may give the doll a bath or wash the doll's clothes.	This illustrates the contrast between dirty and clean.

The important purpose of the classroom teaching is to stimulate and elicit language. What better opportunity is there for natural spontaneous language than when the children are role playing. Here they interact and draw from memory both action and language used by the adults whom they are modeling.

Parents need to observe how the teacher perceives the child's thought and puts language to his ideas. They learn that these opportunities must be wisely used in order not to stifle the child's creativity and at the same time give verbal expression to his thought. For example, when the boy playing father left the playhouse he learned to say "bye" and wave his hand. The girl with the fake fur stole looked at herself and was helped to say, "It's soft." "It's pretty." Parents learned how to be a part of the child's world rather than apart from it.

As the year progressed, parents were able to select good learning activities that provided for the children's linguistic and cognitive growth. Let me share with you three teaching experiences that the parents selected. They planned the procedures and provided the materials.

1. To help the children learn about the life cycle of plants and to learn some of the language of gardening. The parents wanted to plant seeds in the classroom and later transplant the seedlings at home. This required materials for which the parents shared the responsibility. Because of their rapid growth, beans were selected. Two parents assisted in planting the seeds in the six cups of soil.

In addition to the individual cups some seeds were placed on wet towels inside a glass where the roots and sprouts could be observed.

2. To help the children learn colors. The parents insisted upon a color unit for one day out of the three days per week. On the designated day each child would wear some article of clothing with the chosen color. The parents talked about the color and guided the child

in recognizing it at home. The parent also planned an activity that focused on that particular color.

3. To teach the children how to care for and handle pets. Instead of a pet at school all of the time, the parents decided that they would bring their own houesehold pets to visit. The parent who owned the animal would demonstrate how to handle it properly.

It would seem that these parents of children under three are on their way to achieving our goals for them as parents. It has been my experience that it was not until the parent was in the teacher's role that he clearly perceived the important social, physical, emotional, cognitive, and linguistic learnings and their interaction.

From their successes the parents gained confidence and began to transfer to their own environment the important aspects of child development and language acquisition they had attained in this component of the Parent-Infant Program.

THE PARENT LEARNS

Phyllis Rudman, Central Institute for Deaf, St. Louis, Mo.

Researchers have convinced educators of the urgency of the parents' interaction with their child during the critical months before the child's third birthday. Contrary to the traditional educational concept, the child's education does not begin at six years. White (9) feels that by six years of age the child's learning is set for good or bad.

During those months parents can do many things directly and indirectly contributing to the infant's growth and development.

1. They can develop within the child a sense of well being. In addition to providing for his wants and needs by feeding and clothing him, they need to provide tender loving care (TLC). (1)

2. Importantly, they must provide language stimulation through good verbal input by interacting. Probably the most important language modeling is that which verbalizes what mother thinks the child is thinking. This they can accomplish through several types of interaction:

a. During the routine daily care giving in feeding, washing, dressing, the infant.

b. In the play of games like "pat-a-cake," and "peek-a-boo."

c. Labeling the objects as the child explores and manipulates them in his excursions around the home.

d. Talking while going about home chores; e.g., sorting laundry and dusting furniture.

e. Looking at pictures in books and making scrap books for conversation stimuli.

3. Parents can reinforce their child's positive behavior. Praise for such simple acts as attempting to put on his shoes can help the child develop a good feeling about himself.

4. Parents can use materials in the home for useful educational toys and games and stimulate the child cognitively along with linguistic input.

Regrettably, all parents do not possess knowledge about the nurturance of their baby. Many parents are not equipped with information and understanding as to the importance of the early months. They, many times, lack an understanding of growth and development and most of the time have no information on the acquisition of language nor the role of the auditory and visual processes.

Parent-infant program

Deeply embedded, then, in our Parent-Infant Program at Central Institute for the Deaf is the idea that parents are properly the first and the most influential educators and enablers of their own children. Thus the Parent-Infant Program aims to help parents as the major means of directly enhancing linguistic, intellectual, and physical development of their hearing impaired child.

Our focus is therefore on the parent rather than the child. We want the instruction to have lasting effect and to be sustained during the child's total waking hours. Because we want the parent to see the immediate application into her own home, we have a home as a Demonstration Center equipped with all the rooms and furnishings that any home has.

Individual family sessions

The family session is so called because if at all possible we like to have the total family participating. If there is a father in the family, we try to have him attend these sessions, not regularly, but as often as he can. The siblings are encouraged to attend because they are involved at a high emotional level (2). Others, such as grandparents, friends and sitters are included as important contributors to the hearing impaired child's well being.

The sessions are for each individual family because of the wild heterogenity among families. To mention a few differences, parents possess wide ranges of capabilities and experiences. There are economical, temperamental and informational variations. The hearing impaired infant may have another handicap. The age of entry varies. The audiograms are quite different.

Probably the most important variation however, is the stage the parents are at in accepting the handicap. If they have experienced the knowledge of the impairment for a period of time, their coping behavior is quite different from the parent who has only learned of the condition. This has been discussed at length in other contexts (6).

The teacher/counselor

The person who meets with the families on a weekly basis is a teacher of the deaf who has accumulated some counseling skills through in-service training. These individual sessions are scheduled for an hour, although they frequently are longer than that. While the teacher/counselor may use different techniques to reach each set of parents, she has ever present several major objectives.

1. Parents need facts about hearing, hearing aids, lipreading, receptive and expressive language, child management, educational opportunities, to mention a few. Tests are administered periodically to the parents to determine the parents growth.

2. Parents need strategies for getting to the child's eye level, within his auditory range, about his interest level, using repetition, and the like.

3. It is of great importance that parents need a positive relation with their children that fits into the framework of their family.

4. Parents must come to realize that it is they who are responsible for their child's growth and development.

In order to accomplish these objectives the teacher/counselor needs to observe certain principles.

1. The teacher/counselor needs to have a positive attitude. Her attitude conveys to the parent that they have made the right choice for their child. Her attitude helps the parents have confidence in themselves and allays their fears by rational explanation.

2. The teacher/counselor must be emphatic, making a point very clear to a parent, in order to prevent parents developing doubts. She must also be enthusiastic, relieving the parents of tension by developing their positive attitudes toward her as someone who really wants to help.

3. The teacher/counselor must be realistic regarding the family situation and her goals for the family must be attainable. Factors such as educational background, cultural advantages, health and family stability, play an important role in regard to a teacher's expectation. It is very difficult for a hungry parent to be attentive. The teacher/counselor must not impose her value system upon the parent or try to change the parent's value. She is only trying to change her interaction with her child.

In addition, the teacher/counselor must be knowledgeable in all areas regarding hearing impairment. These areas cover such topics as acoustics, language development, current trends in education and medicine as well as eduactional facilities in the city and state.

The teacher/counselor must also be knowledgeable regarding local service agenices where the parent may receive additional help if needed. She may have to aggressively seek information about facilities for the multi-handicapped child and the child needing day care or financial support. Frequently, these facilities have to be visited and discussions held with the receiving staff.

Content

Usually, in the individual sessions the parent is given an assignment to apply a principle or rule to a common daily situation which involves interaction between parent and child. The parents come to the Home Demonstration Center prepared to carry out the demonstration with their child. A few examples might include: preparing cookies, playing with a toy, giving the child or a doll a bath, planting some seeds, household chores such as dusting, making a bed, cleaning out a drawer.

The parents are encouraged during this demonstration to apply principles that have been discussed before with the teacher/counselor at a parent meeting or read in "Chats With Johnny's Parents" (7).

Some parents may need the whole task modeled for them. For some, words have to be placed in their mouth. Some parents continue to need structure, others move along rapidly and apply strategies and principles easily.

Weikart (8) stated that mothers need to develop the ability to understand the child's needs and how she can best fulfill them within the family's framework. He concluded:

> Some mothers may very well do this naturally. In contemporary society however, many mothers seem to have difficulty achieving and maintaining such relationship with their children.—p. 11

Freeburg and Paine (3) stated:

> Children of superior intellectual ability come from homes where parental interest in their intellectual development is evidenced by pressures to succeed and assistance in doing so, particulraly in the child's verbal skills.—p. 71

The teacher/counselor is in a position to evaluate the needs of the contemporary mother who may not be pressuring for anything. Hence she needs, as it were, to prescribe for each set of parents.

Procedures

A teacher/counselor usually prefaces most demonstrations with discussions. Sometimes the discussions are initiated by the parent with a question. Answering the question is imperative and takes precedence over any other activity that might be planned. Every means possible is employed to achieve effective communication with the parent.

Most often the discussion relates to the activity the parent has planned. During this discussion the teacher/counselor checks that the parent knows:

1. Why she is going to do the task?
2. What language or (other) vocabulary she plans to use. Is it applicable to the child's thought?
3. What will interest the child about the activity?
4. What might be anticipated?
5. What strategies will mother use?
6. What alternative strategies has she in mind?
7. What is the application at home?
8. How frequently is the activity likely to be repeated?

Routinely parents are video taped during the activity to give them an opportunity to evaluate themselves. In viewing the tapes parents become more aware of their abilities to communicate with their child.

When parents first enroll, the teacher usually models then the parent repeats the activity while being taped. Discussion follows each viewing. After a while, video tape sequences of approximately 10–15 minutes in duration are made of the mother "working" with the child. After the viewing, a period of self evaluation between parent and teacher takes place. It is a time in which we help the parent become observant of interaction, provoke thoughts and questions and help develop alternatives. It is a sharing process, not a pedogogical session.

It is good when fathers attend to review the video tapes in order to provide him first hand with information of what has transpired in the sessions. It also helps to develop within him a supportive role for the mother. Frequently it leads the way to a more active role for the father. This type of teaching in our program was the topic for a study by Nardine (5).

The informational content tested, as mentioned earlier, is reinforced for the parent through reading. We have a fairly extensive library dealing with topics such as child growth and development, genetics and hearing. We also have chapters relative to the parents' immediate task which we give the parents. These chapters make up a booklet called "Chats With Johnny's Parents" which grew out of our Outreach Projects and will be available in the fall.

All of these channels help the parent establish both short and long term goals for their child but it must be the parent who makes the decisions about his child.

We must keep in mind that as professionals we are members of a team. We are not the team. One parent put it so well in the current issue of "Exceptional Child" (4):

> Although I have learned much, I am clearly one of the lost generation of parents of handicapped children. We are parents who are either intimidated

> by professionals or angry with them, or both; parents who are unreasonably awed by them; parents who intuitively know that we know our children better than the experts of any discipline and yet we persistently assume that professionals know best; parents who carry so much attitudinal and emotional baggage around with us that we are unable to engage in any real dialogue with professionals—teachers, principals, physicians or psychologists—about our children.—p. 521.

The Parent-Infant Program recognizes the importance of language stimulation by parents for hearing impaired children. It also recognizes the significance of factors such as parental, social and emotional needs and educational background. The teacher/counselor promotes effective parental involvement through discussions, video taping and printed material. Parents are a great resource for their children and the teacher/counselor aids and assists to develop this resource to its full potential. We don't want second rate teachers, but first rate parents.

BIBLIOGRAHPY

1. Bernstein, B. "Social Class and Linguistic Development: A Theory of Social Learning," in *Education, Economy and Society*, edited by Halsey et. al., New York: Free Press, 1961.

2. Farber, Bernard. "Effects of a severely mentally retarded child on the family," *Readings on the Exceptional Child*, edited by Trapp & Hemelstein, New York: Appleton-Century-Crofts, 1962, 227–246.

3. Freeberg, N. W. & D. T. Payne. "Parental influence on cognitive development in early childhood," *Child Develpm.*, 38, #1, 1967, 65–88.

4. Gorham, Kathryn A. "A Lost Generation of Parents," *Excep. Child.*, 41, #8, 1975, 521–527.

5. Nardine, Frank. "Parents as a teaching resource," *The Volta Review*, March 1974, 172–177.

6. Simmons-Martin, A. A. A Demonstration Home Approach With Hearing Impaired Children, in *Approaches With Parents of Handicapped Children*, edited by Elizabeth Webster, Thomas Pub., (In press).

7. Simmons-Martin, A. A. *Chats With Johnny's Parents*, Wash., D.C. The Volta Bureau, (In Press).

8. Weikart, David, D. Lambie & James Bond. *Home Teaching With Mothers and Infants*, Ypsilanti: High/Scope Educational Research Foundation, 1974.

9. White, Burton & Jean Carew Watts. *Major Influences on the Development of Young Child, Englewood* Cliffs: Prentice-Hall, 1973.

INTERNSHIP PROGRAMS AT THE NATIONAL TECHNICAL INSTITUTE FOR THE DEAF

Joseph Avery, Coordinator, Graduate and Professional Internships, the National Technical Institute for the Deaf, Rochester, N.Y.

There are three types of internship programs at the National Technical Institute for the Deaf, all with the basic intention of developing or refining skills which may be applied to the development of personal, technical, or communication competencies of deaf persons. The purpose of this presentation is to describe the nature and scope of internships at the National Technical Institute for the Deaf within the context of the physical setting, the process, the history, and the future.

The setting

The National Technical Institute for the Deaf was established by public law in 1965 in response to a need for postsecondary technical training opportunities for deaf persons. It was established as a college of Rochester Institute of Technology, located in Rochester, New York. NTID recently moved into newly completed physical facilities which include a dormitory for 750 students, a dining commons, and an academic complex. The architecture of the new buildings is similar to that of the original structures on the campus of R.I.T.

Present enrollment at NTID is about 650 students with a maximum of 750 projected to be reached in one more year. The overall enrollment of R.I.T. is more than 6,000 students in the day colleges, and more than 10,000 in the evening college.

The mission of NTID is to provide deaf students with the technical, social, and communication competencies that will lead to successful employment and community living.

Two major divisions of NTID have primary responsibility for developing technical competencies. They are the Division of Technical Education and the Division of Integrated Education Programs. Approximately three-fourths of all NTID students are served directly by the Division of Technical Education which is divided into four academic departments, including: (1) Business Technologies, (2) Engineering Technologies, (3) Visual Communications Technologies, and (4) Technical Science. Students in these programs may achieve at certificate diploma or associate degree levels.

Other students who have the interest and ability to succeed in four-year programs cross register into the other RIT colleges. Here they are provided support services through the Division of Integrated Education Programs.

The Division of Communications Programs is responsible for developing and strengthening communication skills which are necessary for successful job placement and community involvement. Other components of NTID which provide support to the mission in various ways include the Division of Curriculum Development and Evaluation, the Office of Professional Development, and the Division of Educational Extension. Internships may occur in any or a combination of these areas. The setting and organization of NTID provide unique educational opportunities for interns in many ways.

The process

All internship programs are coordinated through a central office which is responsible for the applications, selection, program development, supervision, and closure of all internship programs. Internships may be of three types: (1) Graduate, (2) Professional, or (3) Special.

Graduate internships.—Graduate internships are offered to persons nearing completion of a masters or doctorate degree. Graduate internships are intended to complement the graduate's previous training through the application of his or her expertise to deaf students at the post-secondary level.

Professional internships.—Professional internships are offered to persons in education, business, and industry who wish to develop and practice their professional skills in fields relating to deafness.

Special internships.—There are other internship possibilities which do not fit neatly into either of the two previously mentioned categories. The internship mechanism serves as the vehicle for setting up and coordinating experiences of a wide range and duration. A person interested in utilizing the resources of NTID for the purpose of applying his or her knowledge and expertise in working with the deaf may have an opportunity to receive training through the internship program even though the applicant is not in graduate school and may not be working.

After receipt of an application and determining if the appropriate discipline and supervisory situation exist at NTID, then a joint plan for a program is developed among three mutually supportive and cooperating units: (1) the sponsoring organization (educational institution, business, or agency), (2) NTID, and (3) the intern. Individualized programs are designed in cooperation with the sponsoring institution. A written agreement is reached between the candidate's parent organization and NTID outlining the conditions, objectives, and responsibilities of each institution before formal acceptance into the program.

After acceptance into the program, the intern is primarily involved in the area which practices his or her discipline. There are additional activities which occur in different areas of NTID.

Professional and Special internships may be designed in similar ways, however, one program that has been developed for new personnel at NTID has proven useful for certain internship programming. The New Staff Training package for NTID consists of four courses, including: (1) Manual Communication training, (2) Impact of Deafness on Human Development, (3) Communications Characteristics of Deaf Persons, and (4) NTID as a Process and Organization. This program may prove of great benefit to persons new to the field of deafness, such as new rehabilitation counselors for the deaf.

History

Since 1969, NTID has offered 71 internships (inclusive of summer, 1975). Forty-five of those have been graduate internships, 23 professional, and 3 special. The accompanying charts summarize internships by numbers, types, areas of practice, and most of the schools and agencies represented.

Future trends

Future trends of internship programs at NTID include expansion of all three types, a shift in the types and areas represented most strongly, and exploration of a variety of special internship options. Already in process for special internships is a joint program between NTID and Eisenhower College to provide a one-month mini internship to ten liberal arts students who will be doing an independent study project in January. NTID will provide a set of experiences designed to orient these hearing students to deafness and give them some exposure to manual communications training. NTID is also providing internships to communications personnel at Craig Developmental Center, a large institution for mentally retarded persons. It is the intention of the communications specialist at Craig Developmental Center to determine the efficacy of teaching sign language to persons who do not communicate in other ways. It is also anticipated that by fall of 1976 a special internship for new rehabilitation counselors for the deaf will be in operation. This program will consist of elements of the New Staff Training and field work in job placement.

NTID has developed dramatically in its short history. This growth is reflected in its new facilities, size of the student body, staff, and faculty, as well as an extensive network of programs and professional disciplines. This setting provides a myriad of options for internships. NTID looks forward to the future.

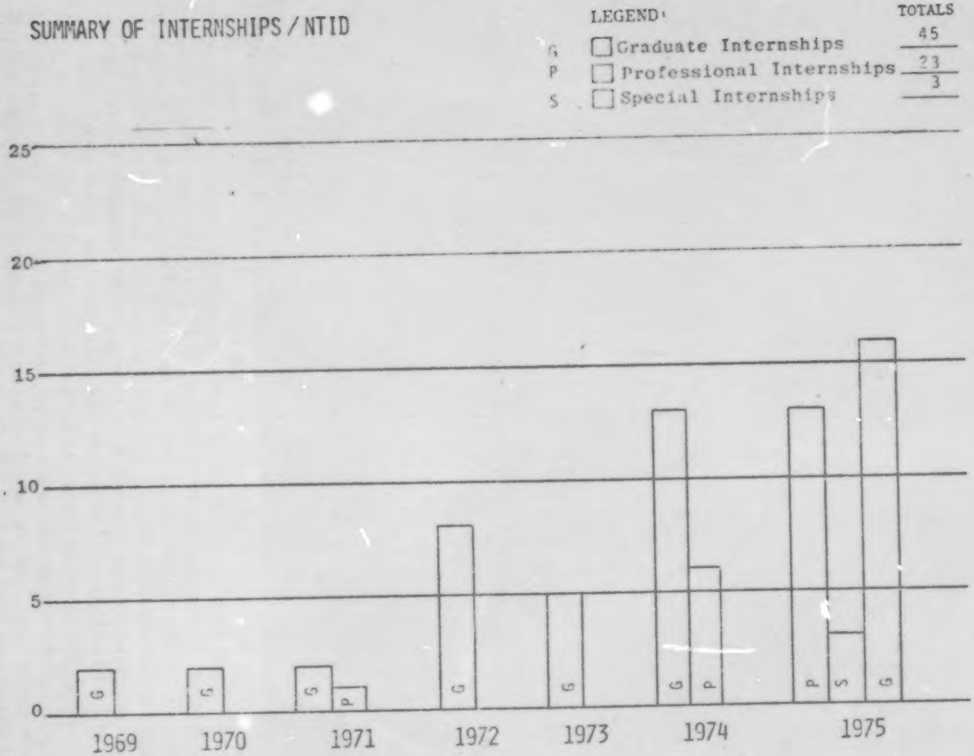

SUMMARY OF INTERNSHIPS / NTID
LEGEND:
TOTALS
G ☐ Graduate Internships 45
P ☐ Professional Internships 23
S ☐ Special Internships 3
25
20
15
10
5
0
G
G
G
P
G
G
G
P
P
S
G
1969
1970
1971
1972
1973
1974
1975

CHART 1

SPONSORING UNIVERSITY OR INSTITUTION	AREA OF INTERNSHIP AT NTID
ACADEMY OF SCIENCES	1) RESEARCH ON COGNITIVE DEVELOPMENT/MANUAL COMMUNICATION/OVERVIEW OF USA EDUCATION
UNIVERSITY OF ARIZONA	1) COUNSELING
BOSTON UNIVERSITY	1) COUNSELING/MANUAL COMMUNICATION
UNIVERSITY OF BUFFALO	1) COUNSELING 1) AUDIOLOGY
EAST TEXAS STATE UNIVERSITY	1) COUNSELLING
GALLAUDET	2) AUDIOLOGY 2) COUNSELING 1) CO-CURRICULAR ACTIVITIES/TEACHING MINI COURSES 3) TEACHING (ENGLISH) 2) TEACHING (MATHEMATICS)
UNIVERSITY OF ILLINOIS	1) RESEARCH/PSYCHOLINGUISTICS & GRAPHIC DISPLAY
IBM	1) TRAINING SPECIALIST
UNIVERSITY OF MARYLAND	1) AUDIOLOGY
MASSACHUSETTS REHABILITATION	1) COUNSELING AND PLACEMENT
UNIVERSITY OF MASSACHUSETTS	2) DEVELOP MEDIA FOR ADVANCED PROGRAMS
UNIVERSITY OF MICHIGAN	1) RESEARCH/MANUAL COMMUNICATION/COUNSELING
MONTGOMERY CITY SCHOOLS	1) OVERVIEW OF POST-SECONDARY EDUCATION (PROJECT NEST)
NTID	1) AUDIOLOGY
NEW YORK STATE SCHOOL FOR THE BLIND	1) OVERVIEW OF POST-SECONDARY EDUCATION (PROJECT NEST)

CHART 2

NEW YORK UNIVERSITY	3) COUNSELING
UNIVERSITY OF NORTHERN COLORADO	1) CURRICULUM DEVELOPMENT COUNSELING
NORTHWESTERN	1) COUNSELING/MANUAL COMMUNICATION 1) AUDIOLOGY
PEPPERDINE UNIVERSITY	1) TEACHING
UNIVERSITY OF PITTSBURGH	1) COUNSELING/ASSESSMENT/V.R. RELATIONSHIP 1) EDUCATIONAL ADMINISTRATION 1) CURRICULUM DEV./JOB PLACEMENT/ED. ADMIN.
QUEEN'S COLLEGE	1) EDUCATION OF THE DEAF
ROCHESTER INSTITUTE OF TECHNOLOGY	2) TEACHING (ENGINEERING)
ROCHESTER SCHOOL FOR THE DEAF	2) OVERVIEW OF POST-SECONDARY ED. (PROJECT NEST)
RYERSON	1) MEDIA PRODUCTION & RESEARCH
SMITH COLLEGE, CLARKE SCHOOL FOR THE DEAF	1) OVERVIEW OF POST-SECONDARY EDUCATION (PROJECT NEST)
SOUTHWEST TEXAS STATE	1) COUNSELING/TEST ADMIN./RESEARCH/MANUAL COMM.
SUNY AT BROCKPORT	2) COUNSELING
SUNY AT GENESEO	1) COUNSELING 1) TEACHING (TECHNICAL SCIENCE) 1) TEACHING (ART)
SYRACUSE UNIVERSITY	1) COUNSELING/MANUAL COMMUNICATION 1) MATH CURRICULA/EVALUATION
TEMPLE UNIVERSITY	1) OVERVIEW OF POST-SECONDARY ED. (PROJECT NEST)
WAYNE STATE UNIVERSITY	3) AUDIOLOGY
UNIVERSITY OF WISCONSIN	1) TEACHING (TECHNICAL SCIENCE)

CHART 3

GRADUATE INTERNSHIP AREAS OF PRACTICE

(most commonly represented)

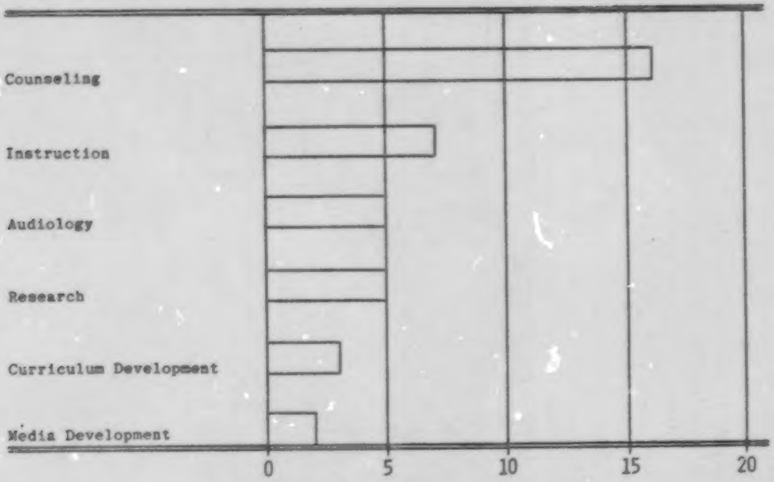


CHART 4

A PROGRAM PROVIDING SERVICES FOR 0–3 YEAR OLD HEARING IMPAIRED CHILDREN FROM SPANISH-SPEAKING HOMES

June Grant, Ph. D., Director, Education of the Deaf,
Trinity University, San Antonio, Tex.

The newly developed graduate program at Trinity University prepares personnel to serve hearing impaired infants and their parents with special emphasis on those families whose dominant language is Spanish. The development of this program has been supported by grants from the Bureau of Education for the Handicapped, Office of Education, Department of Health, Education, and Welfare. The first stage of this development was a workshop which took place in San Antonio in October, 1972, the main result of which was the publication of its proceedings.[1] The participants of the workshop represented one or more of the parameters involved in the growth and development of young children: psychology, linguistics, medicine, speech pathology and audiology, education, and education of the hearing impaired. This group delineated the essential considerations to be incorporated in effective intervention programs. The primary concern was those problems imposed on the child's development of cognition and language due to the interaction between hearing impairment and bilingualism/biculturalism.[2]

Based on the principles set forth during this workshop, curricula for the graduate program, the infants, and their parents were developed. The primary objective of the program is to provide effective means by which hearing impaired infants from Spanish-speaking homes can acquire the language of their culture. The eventual acquisition of English in preschool programs and subsequent academic success are the anticipated sequelae.

The curriculum for the graduate program is composed of studies in five general content areas: early childhood development, teaching in the home, Mexican-American society and culture, bilingualism and linguistics, and deafness. The unique characteristic of this program is the inclusion of the bilingual/bicultural components: the examination of the Mexican-American culture and the linguistic implications of bilingualism. Additionally, the program differs from many parent/infant programs for hearing impaired children in that the latter service mostly middle class families with one of the complicating consequences of poverty, which often delay identification of a hearing impairment, its evaluation and appropriate amplification. Hence, this program has endeavored to synthesize the most promising constituents of infant/parent programs for the hearing impaired, early intervention programs for culturally and economically deprived children, and bilingual programs.

The many successful ongoing programs for hearing impaired infants and their parents have contributed heavily to the objectives of this program in the areas of child development and teaching in the home. In addition to knowledge of sensory/motor development, social/emotional/personality development, language acquisition, cognitive/perceptual development, and the development of creativity of normally hearing children, students must be able to anticipate the possible deviations in these patterns that hearing impaired children will demonstrate, and be able to introduce methods of forestalling the divergence. Additionally, the students must be able to teach parents the necessary skills to foster the development of their child in all areas. Data are accumulating to the effect that parents can be very effective in educating their children,[3] and the students must be able to tap this source of stimulation.

---

[1] "Proceedings of a Workshop on the Preparation of Personnel in Education of Bilingual Hearing Impaired Children." Ages 0–4. (San Antonio, Texas: Trinity University, Education of the Deaf, 1973).

[2] Ibid., p. 2.

The striking departure of this program from other programs is that all the interchange between the professional and the child and parent is in Spanish. But there is more involved than simply translating English into Spanish. In order to execute successful teaching in the home, the teacher must be knowledgeable concerning the Mexican-American culture. First, and foremost, the intervener must be fluent in Spanish and preferably a member of the culture. Secondly, even native speakers from the culture at the middle class stratum may not be conversant with the many differences between the middle class and the lower class. Therefore, great emphasis is placed on awareness of outstanding differences in values placed on various characteristics and traits.

Realizing the great danger of over generalizing some reported cultural differences between Mexican-Americans and Anglo Americans will be examined. It should be noted that many Mexican-American graduate students have been functioning for so long in the dominant Anglo culture, particularly the educational system, that they have forgotten these differences or perhaps never knew of them if the students are from middle class homes. One of the most salient of these differences is in the attitude toward time. To the Mexican-American, time is continuous from birth to death and is not chopped into segments of past, present, and future as it is for Anglos.[4] This attitude perhaps accounts to some extent for the late entry of some hearing impaired children into habilitative programs; parents do not feel the urgency for immediate action to counteract a problem. Two pupils were enrolled in the Bexar County School for the Deaf in the 1974–75 academic year for the first time at ten and twelve years of age.[5]

Another attitudinal difference between the cultures is outlook. The Mexican-American is cautiously pessimistic, and is wont to resign himself to fate; *e.g.*, the fate of having a hearing impaired child. He is likely to feel that it is God's will that he should have such a burden, and that no human being should question the will of God.[6]

The Barrio is another characteristic of the social structure of Mexican-Americans. It is a small social culture in which its inhabitants recognize each other as neighbors and is the center of social life.

---

[3] Earl S. Schaefer, "Parents as Educators: Evidence from Cross-Sectional, Longitudinal, and Intervention Research," in "The Young Child," Reviews of Research, Vol. 2 (Ed., Willard W. Hartup) (Washington, D.C.: National Association for the Education of Young Children) pp. 184–201.

[4] "A Resource Manual for Implementing Bilingual Education Programs." The Regional Education Agencies Project on International Education. (Austin, Texas: The Texas Education Agency 1970), p. 29.

[5] Records at Bexar County School for the Deaf.

[6] Op. Cit., A Resource Manual, p. 30–31.

Strangers to the Barrio are held in suspicion which is another obstacle to overcome in an effort to provide habilitation for these children.[7] There have been instances when our students have not been admitted to the home even though appointments have been made, and the parents know the purpose and value of the visit.

On the other hand, many of these characteristics work to the advantage of hearing impaired children. For example, the Mexican-American family structure is a very strong one with built-in specifications for loyalty, affection, and harmony. Family loyalty takes high precedence over any other group loyalty such as school, business, or even community. This attitude can be maneuvered to advantage to the hearing impaired child if the father can be convinced of the need for early intervention and support, for the Mexican-American patriarchal family structure places the father in complete authority with wives subordinate to the husband and children subordinate to both.[8]

Many Mexican-Americans are practicing Catholics.[9] This too can be turned to advantage. One means of identifying hearing impaired children has been through the cooperation of the Catholic church. Often a parish priest is the first to know of a handicapped child, and he can refer the family to an appropriate agency or program. The archbishop of the San Antonio Archdiocese has notified all priests in the archdiocese of the services available to these families without cost.

In direct contradiction to the description just presented, Gingras points out that there is no monolithic Mexican-American culture, and that most of the literature on Mexican-Americans is primarily descriptive and subjective.[10] He cites the "Curriculum Guide for the Gallup-McKinley Schools" in New Mexico as an example of contributing to the folklore of educators when it lists general characteristics of Anglo and Mexican-American "cultural patterns." [11]

ANGLO	MEXICAN-AMERICAN
Mastery over nature future time orientation success oriented work hard to achieve individuality.	Subjugation to nature present time orientation be satisfied with present work to satisfy present needs obedience.

The important lesson from this controversy is that the intervener must always remember that each child and family is unique. Families newly arrived in the United States from Mexico will present different ideas and problems from those who have lived in the urban barrio and have been welfare recipients for many years. Interveners need to be skillful observers in the effort to ascertain if the so-called Mexican-American cultural attitudes are operant in the homes they are visiting. For this reason, students in the program take at least one course with emphasis on multi-culturalism. Appropriate courses are taught in the Department of Sociology (Seminary in the Minorities), the Department of Urban Studies (Mexican-Americans in the United

---

[7] Ibid., pp. 27–28.

[8] Ibid., pp. 18–21.

[9] Ibid., p. 24.

[10] Rosario C. Gingrás, "The Mexican-American Preschool Child: A Report on Current Research," Appendix A in Muriel Saville-Troike, "Bilingual Children: A Resource Document" Prepared for Child Development Associate Consortium, Inc., (Arlington, Va.: Center for Applied Linguistics, 1973), p. 51.

[11] Ibid., p. 53.

States), and the Department of Education (Education of the Culturally Disadvantaged).

The universals of language acquisition hold forth whether children are learning Spanish or English, and the philosophy of this program is that these infants should first acquire Spanish (if this is the dominant language of the home) and learn English as a second language in preschool programs. Support for this position can be extrapolated from literature that shows that children will learn to read and write better in their dominant language than in a second one.[12] It has been assumed that the necessary abundant linguistic data for language acquisition will not be available if parents are instructed or required to speak English, a language in which they have limited or minimal skills. The fact that many of the parents are not highly literate should not prove too much of a handicap; the emphasis of the program is on oral language. Most of the parents are sufficiently literate to read simple stories (in Spanish) appropriate to the infants.

Another aspect of the program that is superimposed over all concerns is that of self-image for both parents and children. The parent is encouraged to feel proud of her bicultural heritage on the one hand and her ability to help her child learn on the other. Mexican-Americans have in some cases been convinced of the stereotypical view of themselves as inferior and incapable of advancement.[13] Positive self-image for parents is considered an extremely important factor in this program as it is in other home intervention programs. The need for children to be able to establish a positive self-image is equally important.[14]

In the area of study concerning deafness and its implications, students need to know what has traditionally been included in preparation programs. However, the must be able to transmit essential information to parents in a non-threatening manner and in comprehensible terms. Particularly important is information concerning sound amplification, the critical need for a hearing aid, possible causes of their child's hearing impairment, etc. In this respect, there are successful intervention programs to turn to for models. In other words, this program aspires to impart to its students the best strategies for dealing with parents of hearing handicapped children, for dealing with people who do not speak the language of the dominant culture. The degree of success will be measured ultimately by the academic achievement of the children now being served.

BIBLIOGRAHPY

1. *Proceedings of a Workshop on the Preparation of Personnel in Education of Bilingual Hearing-Impaired Children, Ages 0–4.* Trinity University, Education of the Deaf, San Antonio, Texas, 1973.

2. Schaefer, Earl S. "Parents as Educators; Evidence from Cross-Sectional, Longitudinal, and Intervention Research." *The Young Child*, Reviews of Research, Vol. 2.

---

[12] Theodore Andersson and Mildred Boyer, "Bilingual Schooling in the United States," Volume One (Austin, Texas: Southwest Educational Development Laboratory, 1970), p. 147.

[13] Carol Phillips, "Spanish-Speakers in the United States: Mexican-Americans, Puerto Ricans, and Cubans," in Theodore Andersson and Mildred Boyer, "Bilingual Schooling in the United States," Volume Two, Appendix K, (Austin, Texas: Southwest Educational Developmental Laboratory 1970), p. 110.

[14] Joyce Hahn and Virginia Dunstan, "The Child's Whole World: A Bilingual Preschool That Includes Parent Training in the Home," "Young Children, Vol. XXX, No. 4, May 1975, pp. 281–288.

3. *A Resource Manual for Implementing Bilingual Education Programs.* The Texas Education Agency, Austin, Texas, 1970.

4. Records at Bexar County School for the Deaf, San Antonio, Texas.

5. Gingrás, Rosario C. "The Mexican-American Preschool Child: A Report on Current Research." *Bilingual Children: A Resource Document*, by Muriel Saville-Troike. Center for Applied Linguistics, Arlington, Va., 1973.

6. Andersson, Theodore and Mildred Boyer. *Bilingual Schooling in the United States*, Volume One. Educational Development Laboratory, Austin, Texas, 1970.

7. Phillips, Carol. "Spanish-Speakers in the United States: Mexican-Americans, Puerto Ricans, and Cubans." *Bilingual Schooling in the United States*, Volume Two, Appendix K, by Theodore Andersson and Mildred Boyer. Southwest Educational Developmental Laboratory, 1970.

8. Hahn, Joyce and Virginia Dunstan. "The Child's Whole World: A Bilingual Preschool that Includes Parent Training in the Home." *Young Children* Vol XXX, No. 4, May 1975. pp 281–288.

THE VALUE AND TRAINING OF PARAPROFESSIONAL WORKERS WITH DEAF PEOPLE

Ursula Palmer, M.A., Program Director, Training Paraprofessionals for the Deaf Program, Eastfield College, Mesquite, Tex.

Services for the deaf have always been in short supply. Consequently a need for the paraprofessional worker has developed.

What is a paraprofessional?

The paraprofessional is defined as that individual trained in certain skills areas and qualified to offer prescribed services through training completed at a lower level than a baccalaureate program. The individual will be a "functional" paraprofessional who can operate as needed in many and varied environments where needs of the deaf can be met.

This person should work side by side with the professional

1. As a teacher aide/interpreter who functions directly in the classroom with the teacher.
2. As an interpreter who works directly with the social worker or the therapist.
3. As an interpreter in the college classroom.
4. As an assistant with multiply handicapped deaf children or adults.

This word is often misunderstood. One story goes as follows. A student was working as a paraprofessional at a large agency in Dallas. One day while she was busy at work, a group of students from another university were touring the facility. When the staff member, who was leading the tour, came around to the student and introduced her, the staff member said, "I would like for you to meet one of our newest staff members who is a paraprofessional." One of the students on the tour looked at the staff member in all seriousness and said, "I've heard of paraplegics and quadraplegics but I've never heard of a paraprofessional. What do you do?" Ever since then this student has shied away from being called a paraprofessional.

However there is a demonstrated need for paraprofessional personnel for the deaf and hearing impaired. Perhaps the best idea of what a paraprofessional is would be to describe their training.

The Dallas County Community College District has committed itself to providing services to enable each individual student to discover and improve his own special abilities and skills that help to provide services in meeting the needs of the community.

The manner in which they fulfill this commitment is through the development of training programs that meet proven needs for such training within the community.

The initial study for this Training Paraprofessionals for the Deaf program was begun in 1970 at the administrative level with a task force composed of people from the community in fields relating to deafness. One of their findings and recommendations was that there was no such training program anywhere for technicians below bachelor's level who can work with the deaf.

An analysis of existing programs for the deaf, on which to base the recommendations for the setting up of this paraprofessional program, were undertaken. Studies were made of the findings of previous work groups, especially reports from the President's Committee on the Handicapped, known as the Babbidge Report, and on the National Conference on the Education of the Deaf in 1967.

The National Conference on Education of the Deaf in 1967 stated that "The use of volunteer and sub-professional teacher aides should be considered and model training programs should be explored." This was thought of as a practical way of lessening teachers' burdens and relieving the critical shortage of teachers.

Additionally, a search for other services for the deaf, concentrated in the North Texas area, disclosed that there were a few certified interpreters in the area, sign language classes being taught at Callier Center for Communication Disorders.

Questions were also asked of the deaf community about the needs they saw for their fellow deaf citizens. Among those needs listed many times were the following:

1. More interpreters for the adult deaf in more situations, especially educational settings and vocational training programs;
2. A need for trained educational aides to increase potential for language development and free teachers for more direct individual teaching;
3. Better trained houseparents for the residential schools;
4. Specialists in the use of auditory equipment and preparation of media materials to be used in the schools;
5. Individuals trained to serve in recreational programs for the deaf; and
6. Individuals trained to work with the multiple handicapped such as deaf/blind.

Thus, the question, was there a need for paraprofessionals to work with the deaf and adults in different settings, was answered with yes, there is definitely an urgent need for people trained at this level.

Personnel who can be trained to do interpreting and bridge the communication gap between instructor and deaf student; personnel to serve as tutor/interpreter; personnel to assist in classroom activities; and personnel to add strength to existing services as well as additional services in the future.

The *American Annals of the Deaf* in the middle 1960's stated that approximately 730 teacher trainees were scheduled to complete their programs in 1971.

In the 53 teacher training programs listed, continuing reference was made to the neeed for more trained teachers to work with the deaf, but the history of deaf education did not reveal the significant increase in the number of the total deaf population who are congenitally or prelingually deaf and therefore educationally handicapped.

A four-year training program in deaf education does not include training in such broad range of services as trained houseparents in residential schools, people to work in supplementary educational services such as media, trained people to assist deaf infants and interpreters in the community.

Overall educational objectives for the T.P.D. trainees included specific goals as:

1. Training individuals to acquire knowledge of the unique vocational, educational and social problems of the deaf.
2. Training them to acquire knowledge of the communication processes utilized by the deaf.
3. The development of skills in manual communication that are appropriate with the deaf, encompassing the philosophy of total communication.
4. Acquiring skills as an interpreter for the deaf in various vocational and community situations.
5. Offering supplemental aid to the teacher of the deaf and/or the multiple handicapped deaf, thus freeing the teacher from many of her non-teaching duties.
6. Gaining an understanding of life adjustment problems of the deaf and the need to bridge the gaps in communication and understanding between the deaf individual and the hearing community.
7. To provide supplemental training to those who are already teachers of the deaf as well as other professional personnel as vocational counselors, social welfare workers, etc., to gain a better understanding of deafness and to utilize paraprofessionals to maximum effectiveness.

In keeping with the open door policy of the Dallas County Community College District, the same criteria for admissions to the program were followed. The total training program is a two-year program, however, provisions are made for acquisition of possible employment after completion of 30 credit hours. Many students elect to receive a 30-hour certificate which is competency based or the Associate in Applied Science degree as a result of the full two-year program.

The actual curriculum for the training program was divided into two areas:

1. The theory, comprehension and understanding of deafness, the psychology involved with it and the various problems.
2. Laboratory experiences to validate what is learned in the classroom and expose the student to the type of situations he would be working in upon completion of the program.

Laboratory experiences provide one to one contact with the deaf, for example, volunteering in the schools' programs for the hearing impaired, socializing with deaf people at various clubs and functions for the deaf, etc.

The curriculum pattern provides a cluster of basic courses in both the one-year and two-year program levels. Students may elect to complete their study program through full- or part-time work in accordance with their career plans.

Strong emphasis is placed on skill development in all the communication methods for the deaf, emphasizing the concept and philosophy of total communication.

The training program consistently emphasizes a full understanding of the roll of the paraprofessional in the educational institutions and community agencies to obviate any conflicts in employment situations.

As a result of the curriculum philosophy and pattern, students observe theory that they have learned in the classroom in lab exposure and can apply many of the techniques they have been exposed to in class. An example of this is the course, "Introductory Sign Language." This class meets for three class hours per week. The students then participate in a Silent Weekend where deaf people and hearing people gather together and nothing but sign language is used.

Other supervised laboratory experiences require the students to attend at least one to two hours per week listening to video tapes of sign language lessons using the Signed English, SEE method, teaching another person to fingerspell at the dinner table; meeting a deaf child, getting to know them, taking them out once or twice during the semester for ice cream or play activity. Hence, activities provide the students to participate in daily living situations necessary to relate to the deaf child and the deaf adult as a whole entity, a gestalt view.

The course entitled, "The Deaf Adult," provides, in addition to lecture where the theory is presented, and the life problems of the deaf adult are discussed, a requirement that the student meet deaf people individually, spend time at functions for the deaf such as attending the Dallas Association for the Deaf. Encouragement is given to students to attend social events and relax with deaf people.

Students can be required to make surveys. This type of project forces students to use the skills they learn in sign language classes as well as the other theory-oriented classes and view the deaf person as a whole person.

Field work is approximately half of the training program and forces the paraprofessional student to get into the field observing students in the hearing impaired classes at Dallas Independent School District, agencies and at the Deaf/Blind Unit at Callier.

Many students, as previously stated, will take 30 hours and then seek part-time employment. This type of a plan is excellent because the student can apply what he has learned in the classroom on the job; as a teacher's aide/interpreter in the public schools; as an assistant in the Deaf/Blind Unit at Callier, and local agencies.

Typically a student will report "Aha! Theory that I learned in this or that course I can now see in operation." This really excites the students and the faculty because practical application of learned theory and skills is a reality.

The program is now in the fourth year of operation. Approximately 8 students have finished the two-year program. Many students who attend the community college system attend part-time, taking no more than 9 hours per semester in addition to a 40-hour work week. This is true with our students in the Training Paraprofessionals for the Deaf program.

Consequently, students are still enrolled in the program finishing their electives and basic courses with plans to graduate in the next year or year and a half. Some of the students obtain jobs after 30 hours in the program at a certificate level of competency. They work and increase their standard of living.

An Advisory Board for the program makes recommendations to the faculty, approves suggestions and ideas. This Advisory Board is composed of professionals who are top administrators in the field of deafness locally as well as throughout the State of Texas. Consultants who are nationally known are available should the need arise for us to procure their services. The curriculum is constantly under scrutiny to enable us to improve and revise it as new techniques develop.

What is the value of a training paraprofessional program? Has it accomplished what it set out to do? That is, help provide better educational settings for the deaf and services to the deaf?

An employer of three of our students states that "These persons have worked into our program easily and have been well received by the staff, not only in the audiology department, but throughout the clinic. It is the feeling of the staff that our treatment center should consider very strongly the hiring of paraprofessionals in the future. I think paraprofessionals are the only answer to the high cost of delivering medical and health services."

School administrators for the hearing impaired program in the Dallas Independent School System have reported that they have found our students to be a necessary tool in integrating deaf students into hearing classrooms, especially at the high school level where they are grouped in clusters.

The teacher aide/interpreter is the deaf person's key to learning and understanding of what is going on in the classroom.

A further value of the program is that many of the students get a chance to whet their appetite, and to discover for themselves through actual experience—do I really want to get into this field? As a result, paraprofessional students do not go to four years of college, obtain a degree in education of the deaf, teach and become frustrated because they are dissatisfied with their career. Further, students who express a desire to go on to school and accordingly can continue their upper division courses at the local institutions and work at the same time. This keeps them constantly in the field and seeing deaf education from both sides, the teacher's side as well as theory in the classroom. Other students have become more interested in audiology and express a desire to go into speech pathology and/or audiology for many of the same reasons and obtain bachelor's degrees.

The program has very definitely served as a stepping stone toward advanced degrees. In keeping with the value of the program, requests have been received from other community colleges across the country who are thinking of establishing programs to train paraprofessionals either to work with the deaf specifically, the blind or handicapped people in general.

Eastfield College has demonstated that paraprofessionals can receive appropriate and adequate training to prepare them to function adequately in the number of service areas previously stated, and can be successfully integrated as a member of the educational community.

Training Paraprofessionals for the Deaf Programs are of demonstrated value and are providing well trained individuals serving the needs of the deaf community.

BIBLIOGRAPHY

Education of the Deaf, The Challenge and the Charge, a report on The National Conference on Education of the Deaf, Colorado Springs, Colo., 1967.

Gartner, Alan, and Harriet Johnson, *An Examination of College Programs for Paraprofessionals*, published by New Careers Development Center, New York University, New York, N.Y.

Henderson, S. C., and D. H. Francis, eds., *The Meaning of Deafness*, reprinted from the *American Annals of the Deaf*, vol. 107, No. 6, 1962.

Lloyd, Glen T., ed., *International Research Seminar on the Vocational Rehabilitation of Deaf Persons*, published by the Social and Rehabilitation Service, Dept. HEW, Washington, D.C., 1968.

Phillips, A. M., "Programs to Meet Special Needs: Alternatives to the Associate Degree," in Occupations and Education in the 1970's: Promises and Challenges, published by the American Association of Junior Colleges, Washington, D.C., 1970.

Training Paraprofessionals for the Deaf, the planning and developing of a training program to provide increased services to the deaf in occupational development, developed by the Dallas County Community College District, Dallas, Tex. and initiated through a grant from the division of Occupational Research and Development Department of Occupational and Technical Education, Texas Education Agency, Austin, Tex.

MEETING THE NEEDS OF MULTIHANDICAPPED HEARING IMPAIRED CHILDREN

David Tweedie, Ed. D., Assistant Professor, Department of Education,
Gallaudet College, Washington, D.C.

BACKGROUND INFORMATION

Interest in and concern for multihandicapped children has grown during the past few years. Programs for the hearing impaired in particular have been concerned because they have seen their populations changing to include more children identified as having disabilities in addition to hearing handicaps. These disabilities range in severity from mild behavior problems that inhibit learning to multiple organic and emotional involvements.

In its master plan the Department of Education identified a need for training professionals to work with multihandicapped hearing impaired (MHHI) children. Prior to academic year 1975, however, other commitments precluded the initiation of program development. The department's prime commitment was the continued revision and improvement of the two-year teacher preparation program leading to professional certification in the education of the hearing impaired.

With the fall semester of academic year 1975, a priority for the development of specialization in the area of the multihandicapped hearing impaired was realized. This priority led to consideration of changes in the present two year program to allow more flexibility in student program planning while offering a possible multihandicapped hearing impaired specialization and to consideration of a special multihandicapped hearing impaired program for experienced teachers of the hearing impaired. An additional faculty member was employed to devote one-half time to the planning and development of a specialization/program in education of the multihandicapped hearing impaired.

Population

In the initial stages of planning, concern was expressed as to the target population that our graduates would be serving. Should we indeed develop a program designed to train teachers equipped to provide educational programs for discrete groups within the hearing impaired population? Much discussion was raised as to the possible merits of a training program for teachers of the deaf-blind, teachers of the mentally retarded deaf, or teachers of the emotionally disturbed deaf.

Surveys of educational programs serving the hearing impaired compiled by the Office of Demographic Studies at Gallaudet College show that the population of children with more than one additional handicapping condition has grown rapidly. In the years covered in the survey, 1968–1972, incidence figures indicate that this population has doubled (from approximately 8,900 in 1968, to approximately 16,400 in 1972). (Office of Demographic Studies, 1973.)

Additional information from the Office of Demographic Studies indicated that out of 45,000 school aged children with hearing impairments, approximately 21% had one additional handicapping condition, and 11% had two or more additional handicapping conditions. These figures do not include those children with one or more handicapping conditions that are presently being served in educational programs other than for the hearing impaired.

The largest category of additional handicapping conditions reported by the Office of Demographic Studies in their 1971–72 annual survey was emotional/behavioral problems. In a subsequent monograph Jensema and Trybus (1975) provided detailed analysis of the information obtained on emotional/behavioral problems in programs that serve the hearing impaired. Well noted was the extreme variability of reported behavioral/emotional problems from schools of comparable size with a range of 1.6 percent to 28 percent of the school's populations identified as deviant in behavior. Of additional interest was the fact that percentages of behavioral problems were higher in those students with one or more handicapping conditions accompanying a hearing loss (Jensema and Trybus, 1975). Maternal Rubella was most frequently associated with emotional/behavioral problems and was particularly evident in post maternal rubella males. In approximately one-half (51.7%) of the population identified as having emotional/behavioral problems was the related condition diagnostically significant (brain damage and perceptual-motor disorders). The remainder of the associated conditions must be assumed to be distributed due to the added stress they place on a deaf individual.

In addition to educational programs that serve the deaf a major portion of the mentally retarded deaf are educated and usually reside in a public institution for the mentally retarded. The exact numbers of individuals in this category are hard to determine. The best current estimate is that 15,000 to 20,000 persons under the age of 20 years fit the operational definition of mentally retarded deaf (Task Force on the Mentally Retarded/Deaf, 1973). This operational definition states that, "persons having a combination of mental retardation and hearing impairment of sufficient degree that they cannot be appropriately served by traditional programming for the mentally retarded alone or the deaf alone" should be considered mentally retarded deaf (Task

Force on the Mentally Retarded/Deaf, 1973, p. 2). Certainly large numbers of adequately prepared teachers are needed to serve this population of hearing impaired persons.

Rationale for the Specialization in Multihandicapped Hearing Impaired

One of the major drawbacks for the development of a program designed to educate teachers of discrete disability groups was that many times students are not grouped this way in schools for the deaf. Also, would we not tend to foster further sub-classifications in the hearing impaired population (implying a continuance of disregard for individual needs) while establishing another "specialist" whose training (and possible future certification) would permit him to work with only the select population he studied. Once each "specialization" was provided for, better and more sophisticated differential diagnostics would be needed to insure a child with multiple disabilities was placed in that program most designed to meet his individual needs.

Many persons in the area of special education have begun to examine the value of continued study in varying disabilities. Some feel the trend and the future of special education is in a more generic approach with each discipline attempting to more fully communicate with colleagues having different academic backgrounds.

For these reasons the development of a specialization in the area of multihandicapped hearing impaired was designed to equip a prospective teacher with skills necessary to develop an educational program for students with varying disabilities. Teachers who could evaluate a student's educational needs, assess his physical limitations and capabilities, develop a curriculum for that individual and carry out the instructional program.

The Gallaudet College Graduate School surveyed schools for the hearing impaired in the United States to determine areas of educational need. Survey results indicated that the establishment of a program to train teachers of the multihandicapped hearing impaired was a most critical need for the field. Figures from the Bureau of Education for the Handicapped indicate that approximately six institutions of higher education offer programs to prepare teachers of the multihandicapped. However, at the present time, none of these programs deals with the child whose primary handicapping condition is hearing impairment. It is the concern of the Gallaudet College Department of Education that, due to large increases in the target population and the lack of professional personnel preparation programs, the educational needs of this target population have not been and are not being adequately met.

There are a number of reasons why the Gallaudet Department of Education would be a feasible sponsor for a multihandicapped hearing impaired teacher education program. In addition to the current department faculty, some of whom have backgrounds in this area, there are many other persons on the Gallaudet campus who have experience working with multihandicapped children and a survey of persons interested and knowledgeable in this area has been completed. The consortium of universities in the Washington, D.C. area, of which Gallaudet is a member, adds to the flexibility and depth of course offerings through its member institutions' programs in special education. Furthermore, Gallaudet is able to attract graduate students from around the United States. Because of the national need for professionals it would be best to have the ability to select students from various areas who can return to develop programs and/or serve the needs of those now in existence.

Because of the evident need for a training program to prepare teachers of the multihandicapped hearing impaired and the interest and apparent ability of the Gallaudet Department of Education to respond to this need, it was proposed that the Department of Education offer a multihandicapped hearing impaired specialization at the master's degree level and a multihandicapped hearing impaired program at the post-master's level. The proposed date for the establishment and implementation of the multihandicapped hearing impaired specialization/program was the academic year 1975–76.

PURPOSE OF THE PROPOSED SPECIALIZATION

At present, some educational programs have adopted special provisions for multihandicapped (or for certain categories of multihandicapped) hearing impaired children through special classes or individualized instruction. However, in too many instances these children are grouped together indiscriminately or given little special attention. Conferences on the multihandicapped hearing impaired have been held; administrators and teachers continue to cite this as one of their major concerns. Yet few school or training programs have made adequate provisions to meet the special needs of hearing impaired children with mild, moderate, or severe additional handicaps. It is the purpose of the Gallaudet College specialization/program in education of the multihandicapped hearing impaired to provide teachers trained to meet the needs of this population.

MAJOR PURPOSES

1. To meet a high priority need in the field by providing teachers of children who are identified as multihandicapped hearing impaired.
2. To meet the needs of a population presently lacking adequate educational intervention.
3. To effect change in the present treatment and classification of children identified as multihandicapped hearing impaired by providing professionals knowledgeable in this area of specialization.
4. To develop in teachers of the hearing impaired specific competencies appropriate to the educational treatment of multihandicapped hearing impaired children.
5. To provide specialized academic work and practicum, leading toward CED Professional Certification, for teachers qualified for and interested in work with multihandicapped hearing impaired children.

CHARACTERISTICS OF THE PROPOSED SPECIALIZATION

A basic assumption for this program is that teachers who work with multihandicapped hearing impaired need specific skills over and above those who work with normal hearing impaired children. These teachers, however, should have experiences and competencies for working with the normal hearing impaired populations. Modification of programs to meet the needs of multihandicapped hearing impaired can only be realistically developed by persons who know the appropriate level of student performance.

The philosophy of the proposed specialization will be to prepare teachers who can identify areas of weakness, develop individual programs, and if possible integrate back into the regular classroom those children with less severe disabilities. Teachers will also have competencies in providing programs for those children whose disabilities prevent them from integration into the regular program. Individualized program development will be stressed for meeting the needs of the heterogeneous populations that are typically contained in a unit for multihandicapped hearing impaired children.

Students may enter the program full time at one of two levels:

Level 1.—A two semester program (25–27 hours of graduate credit) for teachers of the hearing impaired with the M.A. degree. The program would lead to a special certificate in the area of the multihandicapped hearing impaired.

Level 2.—A two year program (four academic semesters, 57–59 hours of graduate credit) for students with a bachelor's degree who wish to pursue an M.A. degree in education of the hearing impaired with specialization in the multihandicapped hearing impaired.

A number of courses specifically designed for this specialization/program would be selectively offered as electives for others, such as:

1. Full-time and part-time students in the teacher preparation program who are pursuing other specializations, e.g., preschool, elementary, secondary;
2. Special students such as teachers working with multihandicapped hearing impaired students in the D.C. Metropolitan Area;
3. Consortium students from member colleges and universities.

CONCLUSION

The Department of Education at Gallaudet College is attempting to meet the needs of all hearing impaired children. We would certainly encourage other teacher preparation programs to consider the needs of multihandicapped hearing impaired students. We would also encourage your input on the further development of programs in the area of multihandicapped.

THE GALLAUDET GRADUATE SCHOOL PROGRAM IN SIMULTANEOUS COMMUNICATION IN THE DEPARTMENT OF EDUCATION

Gerilee Gustason, Ph. D., Assistant Professor of Education, Gallaudet College, Washington, D.C.

The Department of Education of the Gallaudet Graduate School has had the responsibility for simultaneous communication training of first year graduate students in the departments of education, audiology, and counseling.

These graduate students come into the program with different levels of skill, from those who know no signs at all to those who are already fluent signers—interpreters or deaf graduates of Gallaudet. They also come with different communication needs, depending upon the age level they will be working with, the purpose of the interpersonal communication, and the type of Sign used by the deaf individual with whom they wish to communicate. Because the needs of graduate students in counseling differ from those of education and audiology majors, they have been in special modules, and will be in separate classes next year. Accordingly, the following will relate only to graduate students in education and audiology.

The program they enter has been newly developed over the past two years. It currently consists of a one year program, involving two semesters of three hours a week at two credits per semester. The courses are set up on a Pass-Fail basis. If a student does not meet the specified criteria during a given semester he may receive a grade of Incomplete for certain skill requirements. In this case he has until the end of the following semester to meet these requirements; if he fails to do so, his Incomplete is automatically changed to a failing grade.

The requirements, briefly, lie in these areas: (1) Receptive skills; (2) nonverbal skills; (3) expressive vocabulary; (4) fluency; and (5) theory of manual communication.

The first step in the fall is to sort the students out by current level of skill. This has been found to be effectively done by means of the receptive evaluation. This evaluation consists of a video tape of four separate sections or levels, each including a story with five comprehension questions, two practice sentences and twenty test sentences. All are without voice except for directions.

Level 1.—Slow rate of delivery, English word order, mouthing.

Level 2.—Normal rate of delivery, English word order, mouthing.

Level 3.—Normal rate of delivery, English word order, no mouthing.

Level 4.—American Sign Language (with this level there are 10 test sentences, not 20, and they must be translated into English).

Criteria for passing each of the first three levels have been a maximum of five errors on the test sentences—this will change to an 85 percent accuracy requirement next year—and four correct answers to the five comprehension questions on the story. For the fourth level, eight of the ten test sentences must be rendered into an acceptable English translation, and the five comprehension questions on the story must, like the other levels, have four correct answers. To pass the course at the end of the year, students must pass at least the first two levels. Evaluations are given twice during the fall semester and approximately every month during the spring semester. Currently there are three forms on videotape, and a fourth will be made this summer.

A nonverbal evaluation and practice is next given. The purpose of this aspect of the course is to emphasize expressiveness, the use of mime, and flexibility in a communication situation. Students are given six sentences, or questions, two on each of three levels of difficulty, to get across to a partner without the use of formal signs, although natural gestures are permitted. The partner can respond with voice—"do you mean. . .", etc. Four sentences must be completed successfully within a maximum of 20 minutes. Sample sentences at each level are:

1. What time is it?
2. All the girls will meet at 3, all the boys at 4.

3. Which kind of book do you like best—a western, a mystery, or a romance?

The next step is an expressive vocabulary evaluation based on approximately 850 words. These words are broken into two modules, Expressive I and Expressive II. For each mod, the test consists of forty isolated words, for which an acceptable sign must be given for at least 38, and twenty sentences (where no more than five words that were on the list may be "forgotten." These two evaluations should be passed during the first semester, although we found it necessary to extend the time limit for those arriving in the fall with no signing skills. For these, and most of the remaining modules to be mentioned, videotapes are available in the library with both words and sentences for review and receptive practice, and are available at any time the library is open. Evaluations may be requested at any time a student feels ready; if he passes, he can go on to work on the next module.

For the fluency evaluation students are videotaped in an interview situation, and these tapes are rated independently by at least three of the simultaneous communication teachers on a scale of one to five for signs, fingerspelling, and simultaneity. The various ratings are then averaged for the student's fluency rating. Last year the requirement for passing was a 2.0 rating by the end of the year, but it was the consensus of the instructors that this should be raised to 3.0 in the future.

The requirement for sign language theory has in the past called for the papers detailing specific answers to given questions concerning various types of Sign, principles of sign systems, and opinions, and four observation reports of communication situations. It is likely that the papers will be changed to a test situation in the future. The four observations entail reporting on the communication observed to and from one individual during a ten to fifteen minute situation, from each of: (1) a preschool; (2) an elementary school; (3) a secondary school; and (4) a club for the deaf. These reports are due at the end of March.

During the spring semester, three modules of five weeks each are offered. Students may choose from approximately five different classes during each of the three periods. Education majors are required to take one of the following: Preschool, Elementary, Manual English. Other modules available last spring included ExpressiveII, Beginning Interpreting (10 weeks), Cued Speech, Beginning and Intermediate Ameslan, Reverse Interpreting, and Songs in Manual English. Hopefully more will be added for advanced students in the future, such as Storytelling, How to Teach Manual Communication Classes, etc. Mods are given if a minimum of five students sign up for the class.

Students who have met all the requirements also have the option of taking evening courses through the Office of Sign Language Programs at Gallaudet. In spite of their course loads, some students take advantage of this opportunity to take these evening courses in addition to those given by the Department of Education.

Many students are requesting that a third semester be made available as an elective. At this point this possibility is still some way off, but it's good to know we leave our students wanting to learn more.

THE RELATIONSHIP OF SIGN LANGUAGE TO MEMORY PROCESSES IN POSTSECONDARY DEAF STUDENTS

Richard C. Nowell, M.A., Research Assistant, NTID; Lynn S. Liben, Ph. D., Assistant Professor; Carla J. Posansky, Ph. D., Assistant Professor, all from the Center for Development, Learning and Instruction, College of Education, University of Rochester

In a postsecondary technical education program such as the National Technical Institute for the Deaf, it is necessary to do research that is directly related to identifying and facilitating development of skills needed in technical vocations. To fill this need, it is necessary to examine various cognitive processes in order to understand how deaf students learn in the classroom so that teachers might be able to teach these technical skills more effectively. In the history of cognitive research with deaf people, Conrad (*1*) posed the essential question of whether deaf students are thinking in the same medium as their teachers. Research attempts to understand the early mode(s) of cognitive processing among the deaf have included, for example, Conrad and Rush's (*2*) investigation of acoustic and other kinds of memory confusions, as well as investigations by Conrad (*3*) and Locke and Locket (*4*), which showed that auditory errors were more often made by deaf students who had intelligible speech than by those who did not. On the other hand, students not possessing intelligible speech tended to make errors based on visual shape and dactylic properties. Bellugi and Siple (*5*) have also investigated processing in short-term memory where signs were used as stimuli. At NTID, with the help of research personnel at the University of Rochester, we are currently seeking information as to the relationship of sign language to later long-term memory processes in deaf students.

Our first experiment involved the use of a free-recall task. Such a task involves the learning of an unordered list of words and thus is a task that is similar in some ways to learning tasks in the classroom. The use of such a task enables the investigator to examine how students are processing information by analyzing the organization that subjects impose on items in the to-be-remembered list. That is, which words do subjects group together when they learn the word list and what relationship do they perceive in those words? We developed a list of words to use with our deaf students that could be easily clustered or organized in one of two ways.

The list that we developed contained 16 words which could be divided into four groups of four words, either by the semantic meaning (e.g., occupations) or by similarity in the shape of the signs for the words (i.e., the same hand formation).

TABLE 1.—WORDS USED IN THE 1ST FREE-RECALL TASK

Semantic category	Food	Country	Animal	Occupation
Hand shape:				
F	Tea	France	Fox	Preacher.
5	Cheese	Germany	Lion	Fireman.
U	Egg	United States	Horse	Nurse.
A	Coffee	Canada	Turtle	Scientist.

The words are shown in Table 1. The four categories were foods, countries, animals, and occupations. One word from each of these groups is formed in sign language with the same hand shape. Students were shown the list of words either in sign language on videotape or printed on slides, and after seeing the list were asked either to sign the words or write them. All words were presented for approximately two seconds. After trying to remember the list for the first time, each student was shown the list again (in a different random order) and asked to try to remember the words once more. This study-test procedure was continued until the student remembered all 16 words. A week after the first testing each student was asked to come back and, with no further instructions or presentation, was asked to try to remember the words.

It was expected that the results would show that some students would group the words by meaning and others by sign similarity and that the groupings would be influenced by whether the student saw words or signs, and whether one gave answers in words or signs. The actual results showed an overwhelming grouping by the meaning of the words, with the clustering by sign similarity occurring only at a chance level. Clustering scores thus indicated that the students were aware of the categorical similarity of the meanings of the various words, and that they may have used that knowledge in remembering the words, since both the degree of clustering and the number of words recalled correctly increased concomitantly across trials.

In evaluating the study we considered possible conditions that might have influenced the outcome. First, we did not carefully control the characteristics of the students in the study. Of the 16 students in the study, several had strong oral skills and did not seem to be extremely dependent on sign language as a communication mode. Since oral skills have been shown to influence processing mode, this may have biased results against clustering by sign similarity. It may also have been the case that the relationship of the words by meaning was overwhelmingly obvious. Verbal learning literature has demonstrated that whenever semantic clustering is possible, subjects choose it over any other clustering bases, such as orthographic or acoustic. Finally, it may indeed be the case that while nonverbal processing occurs in short-term memory according to the research previously cited, no such processing is evident here for long-term memory.

For an empirical test of the above alternatives we redesigned our word list and repeated the study. First, the list of words was changed so that the 16 words could be grouped together in four groups of four words that were very similar in sign language. Obvious grouping by meaning was eliminated. The words were carefully screened with many deaf students to select words that were generally signed the same way by all deaf students.[1] The new words are shown in Table 2.

TABLE 2.—WORDS USED IN THE 2D FREE-RECALL TASK

Group 1	Group 2	Group 3	Group 4
School	Chair	Science	Machine.
Cheese	Name	Drama	War.
Movie	Egg	Race	Football.
Paper	Train	Game	America.

---

[1] Even with such precautions, a couple of regional signs were noticed for such words as "cheese" and "movie".

Also, in Experiment II, we tested three groups of subjects. The first group consisted of 16 deaf students whose parents had normal hearing. The second group was composed of 10 deaf students whose parents were also deaf. (The smaller number of subjects was due to the small number of deaf students at NTID who have deaf parents and who also met our other criteria.) Finally a third group contained 8 hearing staff members whose parents are deaf. All of the deaf students were profoundly prelingually deaf, good signers (as shown by IV or V scores on a 5-point profile of receptive manual communication skills established by a test administered by NTID) and poor receivers of oral communication (as shown by I, II, or III scores on a 5-point of reception of language by speechreading with amplified sound).

Several other changes were also made in the testing procedures. All subjects saw the word list for 8 trials instead of as many trials as they needed to learn the list. This was to eliminate the necessity to evaluate the correctness of the signed responses during testing. To eliminate the advantage of reviewing past responses that had been made on each trial (something that signers cannot do), those who wrote their answers wrote them in a spiral-bound booklet, turning the page after each word was written. Additionally, after the re-testing of subjects a week following their first learning of the list, the strategy of grouping words together according to their similarity in sign language was explained to the subjects, and each was asked to try to remember the words again.

Contrary to our expectations, once again there were no significant clustering effects. There were also no significant differences in the treatment (presentation and response mode) effects among the three groups. Idiosynchratic organization which may have occurred among subjects was also tested using Pellegrino's revision of Tulving's subjective organization measures. The degree of such organization was also very small and increased with the amount of words recalled correctly only for the hearing subjects.

Interestingly, however, after explanation of the strategy of clustering by sign shape was given to subjects, the following increments in mean scores were observed in the number of words remembered by the three groups: hearing with deaf parents, 12.75 to 13.87; deaf with hearing parents, 8.50 to 9.81; deaf with deaf parents, 8.60 to 10.20. Thus, there was a significant improvement in recall after explanation of the basis for organization ($p<.01$).

These results lead to several conclusions. From Experiment I, it is evident that when a strategy for organization is available in terms of semantic grouping, deaf students can use such a strategy in free recall. However, the absence of clustering by sign shape in the second part of the study could be an indication that deaf students do not spontaneously process list items in a mode which makes sign similarity a viable organizational strategy. It may be, however, that signs which seem similar to us are not perceived as being similar by deaf students, since no normative data were available here as was the case with semantic categories. There is also the possibility that deaf students do not actively search for organizational strategies to use in such a task, although they can and do use such a strategy if the strategy is very obvious or explicitly explained. This latter alternative is supported by the lack of subjective organization in Experiment II, although subjective organization here may also be low due to the new random presentation order of the list of words on each trial. It seems most reasonable to conclude that organization by sign similarity as represented by the signs used in this study is not an obvious memory aid to deaf students who may not be skilled in searching for and making use of memory strategies. The entire question of how deaf people process sign language and the implications that this has for their teachers needs further research. There does appear to be a need for a structured effort by teachers to instruct deaf students as to how they can use various strategies to learn material in the classroom.

REFERENCES

1. Conrad, R. Short-term memory processes in the deaf. *British Journal of Psychology*, 1970, *61*, 179–195.
2. Conrad, R., and Rush, M. On the nature of short-term memory and coding by the deaf. *Journal of Speech and Hearing Disorders*, 1965, *30*, 336–343.
3. Conrad, op. cit.
4. Locke, J., and Locke, V. Deaf childrens' phonetic visual and dactylic coding in a grapheme recall task. *Journal of Experimental Psychology*, 1971, *89*, 142–146.
5. Beilugi, U., and Siple, P. Remembering with and without words. Paper presented at the International Colloquium of CNRS, Paris, 1971.

STUDENT LIFE PROGRAM: TEXAS SCHOOL FOR THE DEAF

Roy Munn, Texas School for the Deaf, Austin, Tex.

Introduction

The major purpose of a residential component of an educational facility is to prepare the students to socially and emotionally accept independent living upon graduation. This may be a slightly different purpose than what most educational programs proffer. Most educational programs are based on data that are substantiated by both research and application. The primary person in these programs is the teacher who has at least endured a four year training program in order to be able to implement the process of education.

On the other hand, most socialization programs are conducted by parents who have not gone through a formal training program which aids them in the implementation of a socialization program. This is a process that is not usually formalized and typically does not lend itself to the evaluation process of traditional academic subjects. However, the process of socialization is the objective of the residential segment of an educational system. The following is an outline of the Student Life program at the Texas School for the Deaf (TSD) and some of the efforts currently underway to formalize this socialization process.

I. GENERAL INFORMATION CONCERNING TSD

The Texas School for the Deaf has two campuses—South Campus and East Campus. The current enrollment is 744. The East Campus has approximately 230 students ranging in age from four through twelve years of age. The South Campus has students ranging in age from ten through twenty-two. Texas School for the Deaf has a residential capacity of 620. These 620 students are housed in 30 structures. The South Campus has 22 cottages with 16–24 capacity, and one dormitory, Emily Lewis Hall, with a capacity of 80. The East Campus has seven cottages which hold either 20 or 24 students. Most cottages do not have eating facilities in the individual cottages. East Campus has a cafeteria and half of the cottage residents on the South Campus eat in the cafeteria, also.

There are a total of 84 houseparents who are directly responsible for the supervision of the students during, before and after school hours, and on weekends. Each cottage has a cottage manager who is responsible for the cottage at all times but the eight days per month he/she is off duty. Houseparents work on a 28 day cycle (with eight days off also). The manager has managerial responsibility over the other houseparents who work in the cottage, and is responsible to the dean of men or dean of women on the South Campus (depending upon whether the cottage is a boys' or girls' cottage) or to the dean of students on the East Campus. Each dean is responsible to the director of student life.

II. IDENTIFICATION OF OBJECTIVES FOR SOCIALIZATION FORMALIZATION

In May of 1974 a Needs Assessment for TSD was initiated by the school and completed through the University of Texas Office of School Surveys—Special Education Component. The initial project was to establish baseline data with a five year plan to assess the direction, quantity and quality of the educational service delivery systems at TSD. Within the Student Life area, the data collected indicated that certain objectives could be met that would aid the socialization process as identified in the introduction to this paper.

The core need identified was the necessity of a philosophy of child care that was consistently implemented throughout the Student Life program and throughout the school. The philosophy now being used is based upon the premise that the students must become responsible for their own actions and that they, themselves, control their actions. (The idea of this self-discipline, self-responsibility seems almost too obvious to have to be mentioned. However, in the institutional settings for the handicapped, often times this is not true.) The underlying rationale for assessing responsibility comes from the concept of developmental stages. For example, the older the student, the more responsibilty and corresponding privileges the student may assume. A corollary to this concept is that the implementation of discipline requires that any corrective action should be closely associated with the inappropriate behavior. For example, if a student does not meet the curfew set, he loses the privilege of signing out for a certain time period.

Underlying the concept of progressive responsibilities and privilege is the developmental process and the need for measurable goals throughout the different age groups. Generally, the needs assessment identified a lack of any consistent program for Student Life. The first step was to identify behavioral objectives based on age grouping. Under the supervision of TSD's curriculum coordinator, houseparents identified behavioral objectives that a student needs in order to successfully transfer from the East (younger) Campus to the South Campus—where the students are older and a bit more independent. Our goal is to develop individual profiles for 57 students who are transferring from East to South campus with hopes of creating a network of communication between the houseparents on both campuses.

In this manner, the profiles would indicate what social skill levels had been reached at the time each student had left the East Campus. The houseparent on the South Campus would then have a frame of reference from which to deal with the student. Any regression could be noted and examined, in hopes that some pertinent generalizations could be made.

Once we have identified behavioral objectives, the task becomes one of teaching these identified skills to the student. Then the process of socializing the student rests mainly with the houseparents. Consequently, a comprehensive training program for houseparents is essential. At this time, houseparent training consists of a 40 hour training program (one week prior to the opening of school). This is inadequate for everyone hired during the school year or for furthering of staff development. An individualized training program for houseparents becomes essential for the process of developing good staff, especially considering the goal of Student Life in relation to the socialization process. Our interest is in retaining a "core" of good houseparents and in cycling other people through the department. The potential for a good starting point, or a learning situation, for a professional is quite extensive. Consequently, our goal is to have people stay in houseparent positions for an average of three years and then to move on to fulfill other personal goals. This provides: (1) the continuity that we need; (2) the input from people who have been outside the school which is necessary; and, (3) the chance for an individual to have excellent opportunities for on-the-job experience.

In addition to the overall objectives, there is one specific need which we are trying to meet through the concept of crisis intervention. That is, how do you deal with a student who is in the middle of a power struggle with another student, a teacher, or with a houseparent?

The first step is to remove the student from the situation; isolate the student, possibly in another room in the cottage or even outside the cottage. The primary objective is to calm the student, so it is important that the student not be immediately accused of inappropriate behavior or intensely queried at that moment about the specific incident. More than likely, one specific occurrence is not the total problem. For example, with ten people living in the same cottage, there are variables of personality and home environment alone which create the potential for one hundred unique interactions to occur. If other variables are added, such as a low grade on a test, breaking up with a "sweetheart", conflict with a houseparent, etc., the number of possibilities increases geometrically. Consequently the purpose of intervention is not to add to, but to decrease, the problem. More often than not, just the chance to be removed from the situation and to talk to someone not always in direct contact with the student will resolve the immediate situation. Then it becomes necessary to deal with teaching the student how to appropriately deal with the same type of situation in the future. To more effectively deal with the many types of crises possible in a residential setting, we are implementing a concept used in special education, that of a resource teacher. We will have in the Student Life area a resource houseparent who will be trained in the area of mental health through the children's psychiatric unit of the Austin State Hospital and will be available to both students and houseparents to improve the quality of the Student Life program.

A small example of our attempts to instill individual responsibility on our campus (and to instruct at the same time) is the establishment of the TSD banking system. It very closely corresponds to the banking system used by the banks in the community. A major portion of most people's lives centers around their financial management ability. We hope to aid the student by exposing him to the banking system he will be using after graduation from TSD.

III. RESULTS OF THIS SOCIALIZATION PROCESS

In essence, the goal of Student Life is to create situations which develop responsibility within each student. In this paper, the word "socialization" might be substituted for "Student Life program" each time it is mentioned. The basic job, as stated in the introduction, of Student Life in the residential setting is to provide a service that is normally provided for the child by the family—socialization. As we are sensitive of this responsibility, perhaps more so than a family to whom this responsibility naturally falls, it is our intention to meet this responsibility in the way most productive for the student. In order to achieve this, there must be an underlying, consistent philosophy within Student Life. It must be one that is void of cultural, political or personal biases; yet is adequate to instill a certain amount of desire for personal values, personal honor codes and the like. Houseparents need to be aware of this philosophy through in-service training. They need to be aware, also, of the importance of their job and their influence on the students.

If the philosophy and objectives are effectively and diligently adhered to, the results for both students and houseparents is beneficial. The houseparents gain a broader perspective of the student and their role with him/her. They receive professional training. As a result, their self-concept is enhanced; as is their marketability, i.e., their ability to secure jobs within their own careers in the future.

The student, however, is the prime beneficiary. If the student has successfully been made aware of the fact that he will be held accountable for his actions and that his actions can deter him from, or propel him toward, his goals, he will have achieved a level of socialization that is enriching in all phases of life. Particularly for residential settings, he will have been made aware of a world beyond the campus on which he perhaps has lived for the majority of his life thus far, and avoid the crisis of a type of "culture shock" which awaits many who have not been prepared for an easy assimilation into the mainstream of day-to-day living. No matter how unpatronizing the setting, a residential school for a handicapped person is much more sheltered, more secure than a community setting. If this residential setting can be utilized to help the student rather than as a mere buffer against the time when the student must leave, it will far outweigh the negative features of residential campuses. If the students, upon graduation, are prepared to take responsibility for their actions and to earn their independence through these responsible actions, the job of socialization undertaken by the Student Life program will have been successful.

THE USE OF OBSERVATION TECHNIQUES WITH DEAF STUDENTS

James L. Collins, Ph. D., Associate Professor, Ohio State University,
Columbus, Ohio

PURPOSE OF OBSERVATION

Observation of student behaviors (and hopefully their progress in learning) has been an integral part of the educational process since the days of The Saber Tooth Curriculum (Benjamin, 1939). Teachers have historically utilized the quiz, the examination, the oral report, the written report and a host of other devices to systematically or unsystematically observe the performance of their charges. Achievement tests, intelligence tests and other psychological tests are additional examples of indirect observational techniques frequently used in schools. By the same token supervising teachers, principals, professors of education and teachers themselves have strained for methods to assess teaching and teachers in an objective and helpful manner.

Over the past few decades, systems of direct observation have been developed for use in the teaching/learning environment and a fair amount of excitement has been generated regarding their potential for the improvement of both teaching and learning. These direct observation techniques are much more flexible than traditional indirect techniques; i.e., examinations or achievement tests, in that direct techniques provide almost instant feedback on the behavior of students and teachers as well as long term feedback.

This article deals with how direct observation is accomplished, gives examples of existing systems, specifies how these systems have been used with hearing children, gives examples of how they have been used with deaf children and presents selected results of their use with deaf children. Because this article has been radically abbreviated, the reader is urged to refer to the references cited for more adequate treatment.

Using the technique

Observing educationally related behavior is not difficult. In fact, it is virtually impossible to visit a classroom or school and not observe such behavior. The difficulty lies in (1) focusing on a set of relevant behaviors to be observed from the myriad of behaviors which occur simultaneously, and in (2) quantifying data related to the observed behaviors. The behaviors which are to be focused on may be as specific as how many times a child leaves his chair during a 30 minute period, through a complex set of behaviors related to the communication which occurs in a classroom and what the interactive characteristics of that communication are. Quantifying the data collected can also be a simple matter of counting and dichotomizing into a seated/unseated summary or it can be the development of seemingly difficult but actually simple matrices of communication interaction.

Significant information has been obtained from the observation of non-interactive behavior in classrooms. For example, Madsen (1968) found that teachers of hearing children typically make far more negative remarks than positive remarks to students. Other studies related to the attending or on-task behaviors of students have also been helpful. However, the most productive research, particularly for the instruction of deaf children has been related to the observation and analysis of the teaching/learning process via the communication which transpires in the classroom. This particular facet of the observation techniques is referred to as interaction analysis since the interactions which occur between and among the persons in the learning environment are the focus of attention. This article deals primarily with interaction analysis since communication is the central issue in the education of deaf children.

Types of systems

The primary step in utilization of the observation technique is to decide what facets of behavior are to be studied and then to choose an existing system or develop a system which will describe those behaviors. Craig and Collins (1970), Flanders (1967), Medley and Mitzel (1963) and Simon and Boyer (1967) deal with this selection and/or development process.

The category system developed by Flanders (1960) is generally recognized as a sophisticated and well-elaborated technique, and it is this system which has served primarily as the model for developing the systems used in much of the research with deaf students. In the Flanders' system, the emphasis is on the verbal communication between the teacher and pupils. Seven categories are recognized for direct/indirect teacher influence, 2 for pupil responses and 1 for silence or confusion.

Flanders Observation System

Teacher Talk

1. Accepting feeling
2. Praising or encouraging
3. Accepting ideas
4. Asking questions
5. Lecturing
6. Giving directions
7. Criticizing or justifying authority

Student Talk

8. Response
9. Initiation

The remaining category, included to handle everything that is not either teacher talk or student talk, is:
10. Silence or confusion.

Entries are made by trained recorders every three seconds in one of these categories. The numbers are recorded in sequence in columns in order to preserve the sequence of observed behaviors. The collected data are then recorded in a 10-row by 10-column matrix which still preserve the generalized sequence of teacher-pupil interaction. These matrices make it possible to describe the interactions, to determine the dominant patterns of the classroom behavior, and to analyze both the general and the specific aspects of the interaction.

Readers are referred to Flanders (1967) for details of the training of observers and the analysis of communication patterns plus their relationship to the teaching learning process.

Craig and Collins (1970) modified the Flanders' system for use in classroom with deaf students. This modification expanded Flanders' original 10 categories to 20 categories to describe the purpose of communication and added 11 categories to describe the mode employed to communicate.

Craig-Collins Observation System (Deaf)

PURPOSE		MODE
Teacher initiated	*Student initiated*	
1. Acceptance	11. Acceptance	Combined
2. Development	12. Development	Dactyl
3. Questioning	13. Questioning	Demonstration
4. Demonstration	14. Demonstration	Dramatization
5. Informing	15. Informing	Evasive Action
6. Directing	16. Directing	Gesture
7. Feedback	17. Feedback	Kinesthetic
8. Criticism	18. Criticism	Manual
9. Response	19. Response	Mechanical
10. No Communication	20. Confusion	Oral
		Written

Craig and Holman (1973) have developed an observation system for use when students are receiving individualized instruction or are not working in traditional classroom settings. This utilizes 10 categories to describe students' activities and 12 categories to describe their modes of communication.

Pittsburgh Revised Interaction Analysis (PRIA): Situation Categories for Student Observation

1. Working at a learning task alone: (a) Working from a learning package or teacher-prepared material; (b) Using a mechanical device (slide projector, filmstrip viewer); and (c) Reading books.
2. Task-related discussion with a peer; student initiated-expressive.
3. Task-related discussion with a peer; student initiated-expressive.
4. Non-productive communication with peer(s). (Goofing off).
5. Receiving assistance from the teacher as part of a group.
6. Receiving assistance from the teacher; student initiated: (a) to explain procedure involved in a learning task; (b) to explain a particular item in a learning task; and (c) other.
7. Receiving individual tutoring initiated by the teacher. (Preplanned as opposed to #8).
8. Receiving assistance from the teacher; teacher initiated (Not preplanned. Teacher intervenes when she notices student is having difficulty).
9. Conference with teacher re: completion of task.
10. Miscellaneous (No interacting: walking across room; fiddling).

Communication mode:

Dactyl
Manual (signs)
Oral
Combined (oral and signs)
Rochester (oral and dactyl)
Written
Gesture
Kinesthetic
Demonstration
Dramatization
Evasive Action
Mechanical

RESEARCH RESULTS

Space does not permit extensive reporting of the results of all the studies mentioned here. Selected results are reported in cursory fashion and the reader is referred to the original sources for detailed reporting.

CLASSROOM STUDIES

Craig and Collins (1969, 197) studied communications patterns in residential and day school environments and across grade levels. They found that teachers of deaf children dominate the communication in these classes by a ratio of approximately 11 to 1. Craig and Holman (1973) and Collins and Rose (1974) observed in an "open environment" at two different schools. In both of these "open environments" individualized instruction was also used. Both studies report a dramatic increase in student generated communication and a dramatic decrease in teacher generated communication under these conditions.

FAMILY-CHILD STUDIES

Collins (1969), Goss (1970), and Looney (1974) have studied the communicative interaction between mothers and their young deaf children utilizing interaction analysis techniques. At the present time, Carol Quick of the Toledo Public Schools, is initiating a project to use interaction analysis techniques to train parents to appropriately expand and shape the language development of very young deaf children. In those studies completed, the findings indicate: (1) it is possible to specifically describe the communication patterns of young deaf children and their mothers; (2) in most all instances observed, quite inappropriate communication patterns for the development of language and communication are utilized.

DISCUSSION

When teaching/learning behaviors are specified, carefully observed, recorded and analyzed the probability of effective teaching/learning is enhanced. The use of systematic observation techniques can provide invaluable assistance to teachers, student teachers, supervisors and other educational personnel as a means to monitor and describe the behaviors of everyone involved in learning process.

The use of interaction analysis to describe the communication patterns in the learning environment is a particularly valuable tool for educators of deaf children. If it is accepted that a major educational objective for all deaf children is the development of good communication skills, then it seems imperative that schools begin to utilize a technique such as interaction analysis to describe what occurs in classrooms and to be able to specify changes which educational efforts make.

REFERENCES

Benjamin, H. *The Saber-Tooth Curriculum*, New York, McGraw-Hill, 1939.

Collins, J. L. Communication between deaf children of preschool age and their mothers. Unpublished doctoral dissertation, University of Pittsburgh, 1969.

Collins, J. L. and Rose, S. Impact of the open school environment on the communicative interactions and social behavior of deaf adolescents. The Ohio State University Research Foundation Research Report #3801–A1, 1974.

Craig, H. B. and Holman, G. L. The "Open Classroom" in a School for the Deaf. American Annals of the Deaf, 1973, 118, 6, 675–685.

Craig, W. N. and Collins, J. L. Communication Patterns in Classes for Deaf Students. Research report: U.S. Office of Education Project No. 7–0640, 1969.

Craig, W. N. and Collins, J. L. Analysis of communicative interaction in classes for deaf children. *American Annals of the Deaf*, 1970, 115, 79–85.

Flanders, N. A. Teacher influence in the classroom. In *Interaction Analysis: Theory, Research, and Application*. Amidon, E. J., Hough, J. B. (eds.) Palo Alto: Addison-Wesley, 1967, 103–20.

Goss, R. M. Language used by mothers of deaf children and mothers of hearing children. *American Annals of the Deaf*, 1970, March, 93–96.

Looney, P. A. An analysis of verbal and nonverbal interaction patterns between hearing mothers and their preschool hearing impaired children. Unpublished doctoral dissertation, University of Pittsburgh, 1969.

STUDENT AND TEACHER ACTIVITY CHECKLISTS FOR USE IN CLASSROOMS OF THE HEARING IMPAIRED

Marjorie L. Hyatt, Evaluation Assistant, Model Secondary School for the Deaf, Washington, D.C.

INTRODUCTION

Craig and Collins (1969 and 1970) have developed and used a classroom observation system based on Flanders' Interaction Analysis. With the Craig and Collins system an observer records 20 categories of teacher or student initiated expressive and receptive behavior and 11 modes of communication. In-depth studies of student and teacher communication patterns are possible with this system. However, a total perspective of classroom interaction is lacking. Some behaviors are encouraged because of a variety of factors such as the classroom environment, types of materials used, and the size of the class. This system does not address itself to behaviors occurring simultaneously with other factors.

Craig and Holman developed the Pittsburg Revised Interaction Analysis (1973) which would enable the observer to record descriptions of classroom situations, initiated interaction, and communication. Using this system, perspectives on the behaviors and activities of an entire class are possible. However, individual student and teacher behaviors are not recorded with this system.

Two classroom activity checklists which combine different variables from all three domains—materials, interaction, and communication modes—can be recorded simultaneously on single sheets were developed by the Office of Research and Evaluation (ORE) of the Model Secondary School for the Deaf (MSSD). The purpose of this report is to trace the history, characteristics, and on-going development of these instruments.

INSTRUMENTATION

A search through *Mirrors for Behavior: An Anthology of Classroom Instruments* found sources for revising and developing suitable checklists for assessing individual student and teacher classroom behaviors.

Originally developed for use in classrooms utilizing individualized instruction, the "Student Activity Profile" (SAP) by Honigman and Stephens (1969) had as its main purpose the assessment of a comprehensive set of student behavior. At the MSSD, the SAP has been revised to assess individual student behaviors (Appendix A). From the same data, entire classroom behaviors could also be charted.

NOTE.—Due to space limitations, Tables have been omitted, a complete copy including all Tables is available by writing the author.

The SAP is divided into four main components each with several subcomponents. The checklists are listed below:

1. Materials[1]

HARDWARE	READ	WRITE
Cassette	Scans seriously	Writing in LAP
Language master	Reading in Learning Activity Package (LAP)	Writing other task materials
Slide projector	Reading other task materials	Writing in workbook
Filmstrip	Reading nontask materials	Writing nontask materials
Film		
Game		
Materials		

2. Interaction

STUDENT	TEACHER
Talk to other student—task	To teacher—gives fact.
Talk to other student—social	To teacher—gives opinion.
Group Discussion—task	To teacher—seeks information.
Group Discussion—social	To teacher—seeks clarification.
Interrupts (bothers teacher or student)	To teacher—hostile and other.

3. Communication[2]

Signs, no voice
Signs and voice
Voice, no signs
No verbal interaction

4. Passive

LEARNING	NON-LEARNING
Watching/listening task	Resting/watching non-task.
	Staring, limited Random Motor Activity (RMA).
	Gross RMA, wandering around.
	Waiting: for teacher or materials.
	Maintenance: sharpen pencil, etc.
	Miscellaneous (Including Testing).

The Teacher Activity Profile (TAP) was developed from the "Verbal Interaction Category System" by Amidon and Hunter (1966). Their system is divided into 12 categories of student or teacher initiated interactions that are applied to a matrix for analysis on the amount, order, and pattern of verbal interaction occurring in a classroom.

The ORE-developed TAP was designed to record individual teacher behaviors, activities, and communication modes occurring simultaneously. The format of the TAP resembles the SAP and the components are:

---

[1] For the materials sections only, data observed could be recorded with the following symbols: U=Used, Un=Unused, D=Diddling with.

[2] Communication modes were added for the purpose of studying hearing impaired populations. An example of observed student behavior could include "1" at "Slide Projector," "Writing in LAP," "Group Discussion Task" and "Signs, no Voice."

1. Type of Activity[3]

Discussion
Lecture
Quizzing/testing
Explaining routine or procedures
Listening Observing
Socializing
Answering questions
Reprimanding
Reading/Writing.
Recordkeeping.
Asking questions.
Talking with another teacher.
Social interaction.
Interaction re-routine.
Academic interaction.
Other.

2. Mode of Communication

Signs, no Voice
Signs and Voice
Voice, no Signs

3. Subject Area

Math
Science
Social Studies
Language/Communication
Integrated Subjects
Other

4. Activity Level

Very Active
Active
Inactive

5. Feedback

Positive
Negative
Maintaining

DESIGN

Prior to observing subjects, the observer inserted individual student and teacher names on separate SAP and TAP sheets contained in a notebook. The observer entered a classroom as unobtrusively as possible and stood or sat where the action could be seen clearly. The round number was recorded by the observer as he checked in the appropriate boxes whatever behavior was exhibited by an individual. The observer continued to scan and observe every individual's behavior in the room during that particular round.

When round one was completed, the observer started another round and proceeded in the same manner to record individual behaviors. Three rounds were considered to be sufficient for one observation session. For a group of 25 individuals, approximately 20 minutes were required to record three rounds. The observer planned to observe three class sessions a week at different times of the day.

The SAP and TAP were pilot tested with an Experimental and a Comparison group at the MSSD. Four experimental group teachers were observed with the TAP. The experiment was an attempt at self-contained, personalized, and integrated curriculum within the greater open school concept of the MSSD. The Comparison group was utilized as a matched representative sample from the open school. One way of assessing the effectiveness of the experiment was to use observation checklists. Tables 1, 2, and 3 show the age, sex, and SAT Paragraph Meaning score distributions of the Experimental and Comparison groups.

---

[3] Data recorded in Type of Activity section only could be marked in one of the following ways: W=Whole group, S=Subgroup, I=Individual, N=No student interaction.

RESULTS

Analysis of the results revealed more than 180 significant biserial correlation coefficients ($p<.05$); with more than 50 correlations for the Experimental group ($N=20$), more than 80 correlations for the Comparison group ($N=20$), and more than 50 correlations for the Experimental teaching staff ($N=4$). Some of the findings are summarized in Tables 4, 5, and 6. The computer correlations for the SAP materials section were based on students who used (1) or did not use (0) the materials during each round. The correlations for the TAP Type of Activity section were based on teachers who were engaged in whole group classroom activities (1) or did not engage in whole group activities (0) during each round.

A frequency count of the students at particular activities revealed some differences between the Experimental and Comparison groups. Table 7 lists the percentages of time the Experimental and Comparison group students were observed at different activities. Some of the differences are pointed out below:

1. Both the Experimental and Comparison group students indicated no verbal interaction approximately 50 percent of the time.
2. The Comparison group read in their Learning Activity Package (LAP) 29 percent of the time as compared to the Experimental group (17 percent).
3. The Experimental and Comparison groups of students wrote in their LAPs 15 percent of the time.
4. The Comparison group waited for their teachers or materials 21 percent of the time as compared to 10 percent of the time for the Experimental students.
5. The Comparison group exhibited Gross Random Motor Activity (RMA) 15 percent of the time compared to the Experimental group's 5 percent of the time.

Table 8 shows individual Experimental group characteristics observed more than 25 percent of the time in the classroom. For example, the first student was observed reading and writing in his LAP as well as having no verbal interaction 25 percent of the time. Also, some students in the Experimental group were observed at particular activities more than one Standard Deviation above the group means for each activity meaning that they showed the particular behaviors more often than the others in the group.

Table 9 reveals individual teacher characteristics of the Experimental group observed more than 25 percent of the time. Teachers observed at activities more than one Standard Deviation above the group means are reported.

Table 10 shows the characteristics of the Experimental teachers as a group observed more than 25 percent of the time in the classroom.

T-tests on the Experimental and Comparison groups' means of selected SAP activity variables were calculated. Six means of the Experimental and Comparison groups were significantly different at $p<.05$. They are the following:

1. The Comparison group students tended to spend more time reading in their LAPs than the Experimental group students.
2. The Experimental group students tended to give their teachers more opinions than the Comparison group.

3. The Comparison group tended to exhibit more social behaviors to their teachers than the Experimental group students.
4. The Comparison group tended to exhibit gross random motor activity more than the Experimental group students.
5. The Comparison group tended to spend more time waiting for their teachers or materials than the Experimental group students.

DISCUSSION

Analysis of the SAP results can reveal communication/interaction patterns which may be the result of influences of program objectives; teacher attitudes and expectations; and environmental restrictions and their implications on movement and expression. The Experimental group met for classes in a one-room building while the Comparison group enjoyed the larger facilities of the open classroom building. Some of the correlations, frequency counts, and T-tests regarding student/teacher interaction and modes of communication appeared to reflect on the aforementioned influences.

The materials used, both hardware or software, may also have direct influences on certain types of behaviors and interaction. Thus, correlations with materials and interaction need to be examined. Differences in group and individual on-task and off-task behavior may offer clues toward subtle patterns when combined or correlated with other variables on the checklists.

The TAP can present insights into teacher behavior that are not easily identified. Again, factors influencing teacher behaviors are similar in nature to those influencing student behaviors. Certain behaviors were observed of the Experimental group teachers. In-depth studies could be conducted to determine desirable or undesirable traits of individual teachers.

CONCLUSION AND RECOMMENDATIONS

The modified checklists for observing and recording student and teacher classroom behavior in classrooms of the hearing impaired were relatively easy to implement. The training of qualified observers to utilize the checklists would only require several practice sessions in the classroom. Thus, they could be adapted for use in other schools and classes of the hearing impaired.

Results from the data obtained on classroom behaviors could be used to assess individual or entire class behavior for traditional, open, or individualized instruction systems. Data can be analyzed in various ways with biserial correlations, frequency counts, and T-tests. Interpretations could be derived from these results to explain classroom behavior in terms of classroom environment and goals set. These results would also assist in the establishment of strategies to facilitate the learning process in classrooms of the hearing impaired.

It is important to note here the preliminary nature of these conclusions and that such a condition is due not only to the lack of replication, but also to the need for more adequate research and development on the instruments. Specifically, at least four basic tasks are indicated below:

1. Tests on the reliability and validity of the checklists need to be conducted.

2. Further analysis of Experimental and Comparison group data using canonical correlations should be done. Several aspects of student and teacher behavior need clarification. For example, the clarification of students/teachers that exhibit specific behaviors and when these specific behaviors occur and effect certain communication modes.

3. The SAP and TAP require reformatting to facilitate increased accuracy and information loading in recording observed behavior.

4. A manual of instructions to accompany the SAP and TAP is required.

REFERENCES

Craig, W. N. and Collins, J. L. *Communication patterns in classes for deaf students, final report.* Pittsburgh: Pittsburgh University, School of Education, June 1969.

———. Analysis of communication interaction in classes for deaf children. *American Annals of the Deaf*, 1973, *118* (6), 675–685.

Craig, W. N. and Holman, G. L. The "open classroom" in a school for the deaf. *American Annals of the Deaf*, 1973 *118* (6), 675–685.

Simon, A. and Boyer, E. G. (Eds.). *Mirrors for behavior: an anthology of classroom observation instruments* (Vols. 1–6). Philadelphia: Research for Better Schools, 1967.

———. *Mirrors for behavior: an anthology of classroom observation instruments.* Supplementary Vols. A and B. Philadelphia: Research for Better Schools, 1970.

———. *Mirrors for behavior: an anthology of classroom observation instruments* (Vols. 7–14) and *Summary.* Philadelphia: Research for Better Schools, 1970.

Honigman, F. K. and Stephens, J. B. Student activity profile. In A. Simon and E. G. Boyer (Eds.), *Mirrors for Behavior: an anthology of classroom observation instruments* (*Mirrors* #48). Philadelphia: Research for Better Schools, 1970.

Amidon, E. J. and Hunter, E. Verbal interaction category system. In A. Simon and E. G. Boyer (Eds.), *Mirrors for behavior: an anthology of classroom observation instruments* (*Mirrors* #1). Philadelphia for Better Schools, 1967.

STRATEGIES FOR STAFF DEVELOPMENT

Margaret S. Withrow, Ph. D., Coordinator of Staff Development, Model Secondary School for the Deaf, Washington, D.C.

Judith LeNard, M.A., Coordinator of Staff Development, Kendall Demonstration Elementary School, Washington, D.C.

When change occurs in any organization individual staff members must alter their behavior patterns.

Change can be happenstance or it can be planned. Planned change is designed to direct the organization toward achieving its mission. Therefore, the decisions made and the changes required should be directed toward achieving this mission.

As objectives are established to achieve the mission of a school and decisions are made by administrators and managers the required changes on the part of other staff members should be considered. These changes may require additional skills and knowledge on the part of the staff. What new skills and knowledge will be needed when decisions are made about the philosophy of the program, the methodology of instruction or communication, management style, curricular changes and residence procedures?

In the past schools, institutions and other organizations have depended on one or two day workshops once or twice a year to provide the training needed by staff to begin new programs or to modify old ones. These short term training efforts have not proved effective in making significant changes within the organization. Other strategies need to be explored for adequate means to effect positive change. One such strategy is a dynamic program of staff development.

For the purpose of this paper staff development can be defined as a planned program which is designed to help each staff member increase in knowledge and skill related to the mission of the school.

The purpose of a staff development program is to help the members of the organization to maintain and increase their ability to improve actual job performance. The role of staff development includes the continuing development of skills, capabilities and competencies of staff members which will enable them to perform at increasingly higher levels in defining goals, setting objectives, implementing a plan of action and evaluating achievements in relation to the organization. A secondary purpose of a staff development program is to provide an opportunity for stimulation and personal growth to individuals within the organization which benefits from having highly motivated, continually developing people.

A commitment to staff development in a formal sense—staff, budget, etc., at Kendall Demonstration Elementary School (KDES) was initiated in July of 1974. As such it is completing its first year. Many of the kinds of activities included in the staff development program this year have been done in the past but the approach was not systematic. This is an important point in considering a staff development program. The general concept is not new. Only the application of a process of systematic identification to those needs and activities is new.

All staff development models must reflect their institutions and be modified by experience. Hopefully, by sharing some of the experiences at KDES at its early stages, and the Model Secondary School for the Deaf (MSSD) at a later stage of development, other beginning staff development programs can profit.

In the first year KDES discovered that staff development requires a separate identity but it can not and should not stand alone. This seemingly innocent discovery is the very core of operation in staff development programming. It led to some decisions:

1. The need to foster staff development awareness at all levels of decisionmaking. This staff development visibility is sometimes difficult to achieve if staff development is not part and parcel of everyday thinking.

Most major decisions include hidden implications for staff development. It is necessary to uncover those implications in the discussion stages of decisionmaking. One of the first objectives of an embryo staff development program may be consciousness raising among the staff, especially persons in decision making roles.

2. A second decision was the need to develop an awareness on the part of the staff of the separate but dependent nature of staff development. Staff development, regardless of how large the formal commitment in terms of staff and budget, can never make decisions independent of the rest of the program. With a separate identity, staff development process and resources will influence but should never determine final decision and direction.

A second important discovery was that the staff development model should reflect the characteristics of the institution it serves. A number of characteristics heavily influence how staff development will operate. Among them are size, administrative organization, management style, philosophy and program, budget, student population, staff-size and qualifications, and resources within and external to the institution.

With this in mind, decisions in drawing up a model for staff development at KDES will have to conform with these characteristics and be flexible enough to change as they change.

A fourth discovery concerned the importance of a systematic approach to assessing needs, resources and setting priorities. KDES did not begin with a ready-made model to achieve these ends. At first there was only the commitment and the need. This starting period was a year of learning, of hit and miss, trial and error. Now the beginnings of a system to handle the needs and resource assessment and priority setting is emerging.

With regard to resource assessment, it is more useful to think of the resources and their use in terms of strategies for implementing staff development. This first year, KDES has begun an inventory of these strategies. For administrative convenience, the inventory was categorized into on-site, off-site and education assistance. Of more value in the long run than merely inventorying will be a description of the advantages and disadvantages of the strategies. Budget, time, and scope are restraints that must be considered in strategy selection. These considerations led KDES to commitments for next year. The first is to state need areas in terms of desired objectives to be met which should simplify the strategy selection process.

The second commitment was to begin a systematic process of evaluating the effectiveness of strategies used. With awareness of the "cost and promise" of the available strategies, more flexible and effective staff development planning can be done in the future.

Needs were assessed using a variety of approaches—surveys, questionnaries, discussions (both individual and group), task forces, consultants. The master plan for KDES and our philosophical programmatic commitments were analyzed with regard to staff development requirements.

Since staff development was a new program this year, it was necessary to do initial needs assessment in many of the basic areas. A profile of each staff member's professional qualifications was made and matched with the requirements for the master's degree qualification and provisional CED certification. Where deficiencies were identified, an individualized plan of professional growth was determined.

Now that a process has been established for handling that area of professional growth, the assessment has been incorporated into the regular ongoing program. It can be carried out by supervisors and staff with only resource and monitoring help from the staff development office.

As staff development gains visibility, the implications of decisions and procedures will become obvious and identification of staff development needs should result as an integral part of discussions in the regular decision-making process.

Often, an indepth needs assessment involving optimum staff involvement will be necessary for the purpose of planning staff development activities. The approach to needs assessment and subsequent planning of activities that was found most effective this year involved the use of Task Forces. It has been decided that KDES will make even greater use of this approach during next year. The major disadvantage of the task force approach is the degree of staff time needed to complete the work. The advantages lie in three areas.

1. A group representing various elements of the staff can provide a clearer picture of the problem area and how best to obtain input.

2. The recommendations for staff development strategies will also reflect the benefits of maximum staff feedback.

3. A group representing the various divisions in the school will become knowledgeable of the scope of the problem and the best resources for resolving it.

While all three benefits of using the task force approach are true for any project, the third touches on the very nature of staff development. The end result of staff development, to have a more knowledgeable staff, is partially completed through the task force work itself.

As more needs and requirement areas were identified, three categories emerged. The first was the Basic Requirement Needs which identified the skills or experience essential to the fulfilling of the Gallaudet College and professional certification requirements, and the philosophical and programmatic commitments of KDES including total communication.

The second category was the Innovative Programming Needs or knowledge and training prerequisite to a new area of programming. An example of this would be Open Education, which has been identified as a staff development priority for next year. A small open space program is now a part of our permanent program, but open education is a new area for most of our staff. We will be using our open space program as a resource in the training.

General Advancement Opportunities, the third category, consists of those staff development opportunities that relate more to professional growth of individuals than to a specific or total program need. For example, attendance at a convention or a workshop may result in a better informed individual and KDES would benefit indirectly. That staff person would and should have the opportunity to pick and choose those presentations most interesting to him/her. The General Advancement Opportunity aspect of a staff development program is an essential component. It is one of the means by which the institution can serve the staff members in meeting their goals for professional growth.

Another decision resulting from this year's experience is to make better use of the General Advancement Opportunities by establishing some criterion that would encourage individuals on the staff to articulate their personal needs and plans for professional growth. There is a need for establishing a more effective system for sharing professional information and experiences.

The setting of priorities was somewhat simplified after identifying the three categories. It was obvious almost immediately that this year and next would have to be priority years for Basic Requirement Needs. Innovative Programming Needs will become a priority next year and continue on indefinitely. General Advancement Opportunities would not become emphasized for another two years. Money and time commitments will be alloted for all three groups each year but the priorities are an indication of the relative weight of commitment. Hopefully, in years to come KDES will be setting priorities for staff development on a long range plan developed with maximum staff input. Before moving on to the MSSD model, it is important to note that although many of the characteristics of KDES and MSSD are divergent, their experience with a formal commitment to staff development has demonstrated some components that appear to be basic to successful staff development programming. They are: (1) Commitment to staff development; (2) visibility of staff development in all other areas of the program; (3) staff development linked to other elements of the program; (4) a systematic identification of needs; (5) maximum staff participation in needs identification; (6) system for setting priority; and (7) knowledge of resources and strategies.

The MSSD staff development program in its five years of experience has been able not only to identify these elements but has developed a model that incorporates the essential components. As said previously, a systematic process is required to identify the staff development needs of an organization. This includes: (1) identification of the immediate and anticipated tasks expected of the organization; (2) determination of the knowledge, attitudes and skills required to perform those tasks now and in the predictable future; and (3) assessment of the existing knowledge, attitudes and skills of staff members. Any gap between the requisite knowledge, attitudes and skills and those currently possessed by the staff become development needs which a staff development program seeks to meet. The development needs of an individual may be determined in much the same way, with personal and career goals added to the goals of the organization.

When development needs have been identified, the staff development program is responsible for seeing that those needs are met to the extent that the organization can make resources available. Usually for each need there is a broad spectrum of possible training options ranging all the way from informal self-study to structured, degree-oriented programs. A staff development program should seek out as many alternatives as possible, studying the advantages and disadvantages of each and present feasible options to staff members so that training may be selected on the basis of full information. The process of identifying training needs, listing them in priority, selecting training options to meet those needs and evaluating training experience must take place continually as an organization grows and changes. Thus, the responsibility for an effective staff development program belongs to the whole organization.

This systematic process for determining staff development needs and for selecting training strategies is designed to encourage broad participation by the staff and to allow maximum flexibility in application. The planning model for staff development is relatively simple.

It is performance oriented and consists of various levels of group planning. Each level sends its carefully structured data to a single office for review, coordination with data from other levels within the organization, and eventual recommendation for action. The model is designed to implement the orderly process of accountability on the part of the staff development program.

The following steps are included in the basic planning model:

1. The need for additional training is expressed by either individuals or as groups.

2. From an appropriate group of staff members a Needs Analysis, Planning and Evaluation (N.A.P.E.) group is selected.

3. The N.A.P.E. group analyzes the need(s) for training, identifies strategies, selects strategies, and plans the evaluation for those strategies.

4. An annual plan is developed and tentative budget is prepared by the N.A.P.E. group.

5. The annual plan is submitted to the staff development office.

6. The annual plan is coordinated with other training plans and activities and a comprehensive plan with an accompanying budget is submitted to the management group for approval.

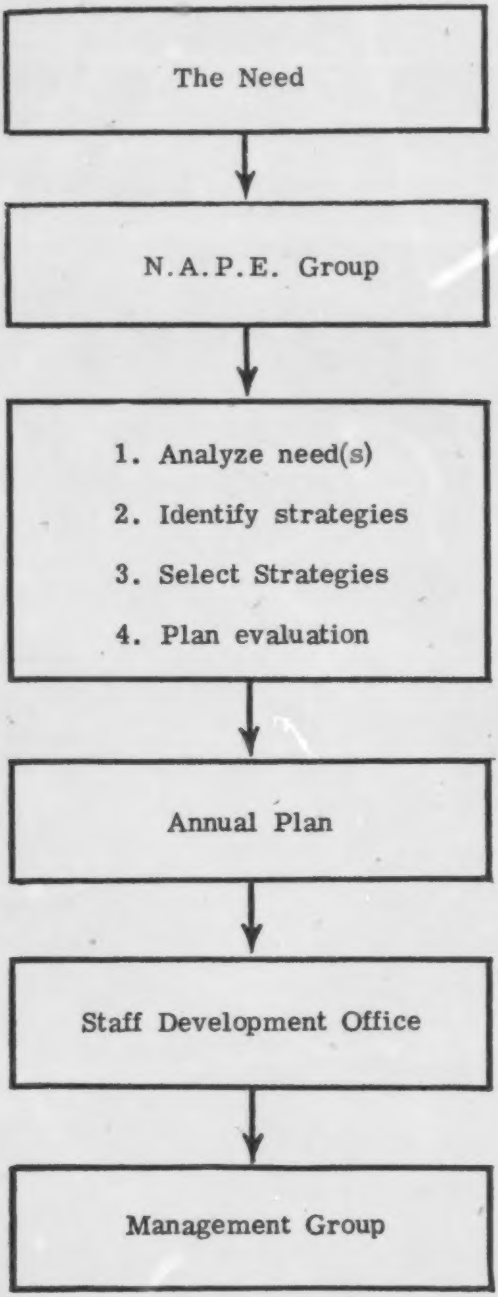

The Need
N.A.P.E. Group
1. Analyze need(s)
2. Identify strategies
3. Select Strategies
4. Plan evaluation
Annual Plan
Staff Development Office
Management Group

FIGURE 1.—Staff development planning model.

The basic planning model (Figure 1) can be applied to small and large programs, to simple and complex organizations, and to modest and generous budgets.

Obviously, not every individual in a school staff can be or would wish to be involved to the same extent in planning and carrying out the staff development program. Nevertheless, to ensure that each individual and group have a sense of being consulted on need, strategy and evaluation, the staff development office provides consultation and resource assistance to each of the N.A.P.E. groups throughout the process from the initial needs analysis stage to the implementation, evaluation and re-cycling stages. During the needs analysis stage, not only training needs for groups are identified, but staff members are encouraged to present their own developmental needs and where more than one individual shares a need, planning on a group basis can take place. Where an individual continues to express a single need, the value of meeting that need can be weighed along with all the other needs. The staff development office is responsible for coordinating the entire staff development program within the organization.

The analysis of development needs

The process of analyzing the development needs of an organization is essentially one of answering a series of logically ordered, progressively specific questions which may be answered at several levels. A cursory response to the questions will produce a superficial view of needs; an exhaustively rigorous study may produce a discouragingly complex description of needs. The staff development needs analysis has the practical objective of identifying high priority development needs which, if appropriately addressed, can be expected to improve the performance or tasks within the organization within a reasonable length of time.

It is possible, of course, that the needs analysis process may raise concerns about existing answers and perhaps challenge current assumptions. Such concerns may very appropriately be expressed to the responsible decision makers for consideration in the next cycle of their policy planning; nevertheless, the further analysis of training needs continues, using existing decisions until others are formulated at some future date. The annual staff development planning cycle is designed to build a support system relevant to achieving both program and individual objectives.

Preparation of staff development plans

When the analysis of development needs is completed and prioritized, the N.A.P.E. group is ready to undertake the second stage of the process—designing a training or development plan to meet those needs. The first step in devising a plan for staff development is to identify the development target as specifically as possible. Statements of needs or problem areas which have been identified usually do not sufficiently indicate what training or development is expected to accomplish. In order to proceed with efficient planning, a need must be rephrased into an objective statement, which clarifies the aim of the training and also makes evaluation possible. Not all development objectives can be easily stated, however, the effort required to fashion sharply descriptive objective statements usually is repaid by training that is more clearly focused on real needs.

When N.A.P.E. groups are suggesting possible strategies to meet the training objectives, they are encouraged to explore many alternative ways that individuals or groups may require the requisite attitude, skill or knowledge. A development strategy may be considered a single training event, a series of events, an apprenticeship, or any number of activities which can be planned to meet a development objective. The greater the variety of strategies suggested, the more informed will be the eventual choice.

The final selection of a strategy to meet a development objective is guided by the principle of cost effectiveness: which of the suggested strategies is likely to produce the greatest improvement in staff performance at the most reasonable cost? The first stage of making this decision requires the collection and sorting of specific, detailed information about the most promising strategies for comparative analysis. This information is then carefully and critically examined for the relative costs and benefits of each strategy. The final plan will list the needs, objectives, strategies, and estimated cost of development for the following fiscal year. The plan is submitted to the office of staff development for review and coordination with plans of other N.A.P.E. groups. The coordinated annual plan is submitted to the management group for review and approval at least one month before the beginning of the fiscal year.

Evaluation of the development plan

The evaluation process for the development plan requires that, as each training objective is identified and stated, the N.A.P.E. group needs to spell out the proficiency level or levels at which that objective is to be achieved. A definite description of the necessary proficiency level or levels for a specific training objective not only helps in determining the effectiveness of that objective, but also assists in the subsequent steps in the evaluation process.

Continuous or cyclical evaluation of the development plans, the objectives for those plans and the specific strategies for those objectives will assure that staff development activities will be directed towards achieving the overall goals of the organization. In addition to examining the attainment or nonattainment of the stated objectives for a staff development activity, an effective evaluation system includes an examination of the other variables within and without the activity itself. It is the responsibility of the staff development office to assure that the goals for the activity are measurable and relevant to the objectives of the development plan. The N.A.P.E. groups review the activities which have been evaluated and make recommendations as to their inclusion in future staff development plans.

On at least an annual basis the N.A.P.E. groups assess the tasks which have been addressed by the staff development objectives throughout the previous year. The purpose of this assessment is to determine whether or not these tasks are now being performed at the level desired as stated in the needs.

III. OTHER STRATEGIES FOR PROGRAMS WITHOUT FORMAL COMMITMENT

From a staff development aspect, the KDES and the MSSD are indeed fortunate with commitment and budget. However, all is not lost if these are not available within your organization. Possible resources for a limited budget are:

1. Training programs within your region—cooperative venture with the staff of the training institution.

2. Hidden money—if your institution is able to bring in a speaker each year—is that the most effective use of the money?
3. Sometimes the State Department of Education has consultants available—come in on a regular basis.
4. Commercial sellers—resources, curricular materials, consultation.
5. Sometimes there is money to attend conferences, conventions.
6. Universities and colleges in the area may be willing to trade one form of expertise for another.
7. Local public school—may be able to trade expertise for expertise.
8. The same may be true for the churches.
9. Community resources.

Most major decisions in any organization contain hidden implications for staff development. Decision makers need to be made increasingly aware of the contribution which planned staff development programming can have on the achievement of the goals of the organization.

THE EVALUATION COMPONENT OF A COLLEGE MODEL OF A COMPETENCY BASED TEACHER EDUCATION PROGRAM

Ann Mulholland, Ed. D., Director, Teacher Training,
Columbia University, New York, N.Y.

INTRODUCTION

It is the intent of this paper to examine the evaluation subsystem of a P/CBTE program pertaining to the assessment of student competence and the assessment of program effectiveness; and to delineate some problems in the evaluation subsystem in need of investigation.

At the outset I should like to make a subjective evaluation—and that is that in spite of the possible unresolved problems in delineating the competencies needed by teachers of the hearing impaired, we can point with pride to the painstaking, cautious, and highly professional efforts of Ralph Hoag's committee on Professional Standards and Teacher Certification and the Connor-Stelle Task Force which represents, I believe, the first national effort to delineate competencies for certification of any field in special education. To be daring enough to be first reflects the leadership and professional commitment of the field (Kudos to the now CED Ralph Hoag Committee).

Just by way of review: How does one determine—How does a profession determine the readiness of its members for professional practice? How do we define "effective professional practice?" (Menges, p. 174)

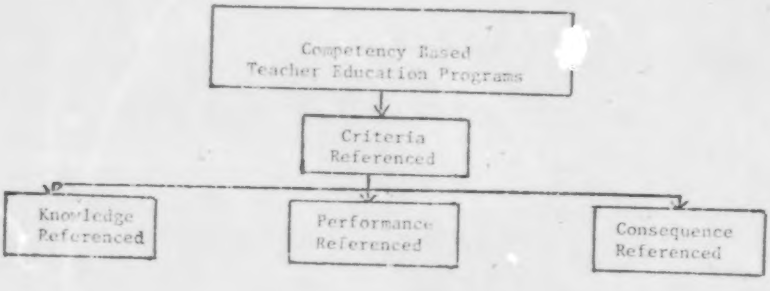
First, one needs to determine the competencies necessary to perform a specific role—teaching, as we now operate—at specific levels and with different functions. We might do this in a number of ways: By "documenting what professionals actually do and/or determining what duties are perceived as important" (Menges, p. 175). The criteria for determining effectiveness might better be defined as a function of time: the immediate, at the end of the first year, the intermediate, after a period of five or ten years of teaching, and the ultimate or career-long. This process of defining effective practice might include: (1) the collection of survey data by examining what highly competent persons in the field of teaching the deaf do, that is simply a process of selecting professionals and studying the various functions they perform, or requesting such data from supervisors as to the role and function of the teachers they supervise; (2) observational reports tallied by supervisors or even by student teachers or through the teachers' own diaries of their activities over a given number of days; or (3) by identifying those teacher behaviors which researchers have found correlate with student achievement, or by comparing teacher behaviors and considering these as process variables which may correlate with again student achievement or the product. While there are a number of such correlation studies in general education, there are not many major studies undertaken in education of the deaf.

Once the competencies have been gathered by surveys, observations, and correlation studies, they must be judged as to their relevance, reliability, and validity. Such findings may be statistically reliable and significant, but the question remains as to their validity. Are they valid? for whom? under what circumstances? in what educational settings? Thus, while competencies for teachers of the deaf have been delineated presumably by the surveys of the original task force or at least from data already gathered employing these means, they may yet need validation.

A P/CBTE program is criteria referenced. That is, the competencies to be demonstrated by the student and the criteria to be applied in assessing those competencies are made explicit and students are held accountable for demonstrating those competencies. The objectives and criteria "unambiguously specified" are the criteria against which the teacher's competency can be measured (Cooper, Weber, and Johnson, pp. 1–3).

Formerly teacher competency has been determined by a set of specifically stated courses required by a university to meet what the state has established as information needed by the student teacher to acquire the knowledge, skills, and attitudes to teach children. This readiness for teaching was determined without regard for the quality of instruction, the time differential, or even the logic implicit in additive credits that the parts guarantee the whole, that a sequence of courses taken guarantees an effective teacher. Today, if universities and colleges are fulfilling their obligations to students or to the field in producing teachers of demonstrated competence, a move toward a different and hopefully innovative curriculum plan has been initiated.

Del Schalock (p. 2) has defined three types of criteria of teacher competencies:



Employing these three, teacher competencies may be assessed in three ways:

1. *Teacher Knowledge.*—facts, principles, generalizations, awareness, and sensitivities that the teacher is expected to acquire.
2. *Teacher Performance.*—behaviors that the teacher is expected to acquire.
3. *Teacher Consequences.*—outcomes that the teacher is expected to bring about in the emotional and intellectual growth of his pupils. (Del Schalock, p. 2)

The thrust towards P/CBTE was the result of the models developed by ten colleges and universities funded by USOE and charged with "reconceptualizing elementary teacher education both preservice and inservice." Two common characteristics of the resultant models were (1) the performance competency base and (2) the use of a systems approach to program design. To recapitulate: the development of the CEC standards and the subsequent mandating by several states of competency based teacher education have markedly affected teacher education in our field. The delineation of competencies required of all teachers of the deaf and the subspecializations at different levels is somewhat simple. To design the evaluation component is a far more complex task. The assessment techniques to be employed represent a formidable, even provocative, challenge.

The what of assessment

In this discussion evaluation will be considered as immediate not career long in duration.

Essentially there are two types of assessment to be considered. First, as Menges has stated (p. 182) assessing knowledge of subject matter. Since "professions are by definition based on a body of knowledge rather than solely on technique", one component of readiness for professional practice is rather universally included as subject matter knowledge and frequently or primarily is concerned with tests of principles, facts, and concepts reflecting skills of recall or recognition or memory and is not considered a high level cognitive skill. Secondly, continues Menges, is assessing the ability to apply subject matter which is defined simply as the ability to apply in a new situation whether by analysis, synthesis, or other strategy what was learned earlier.

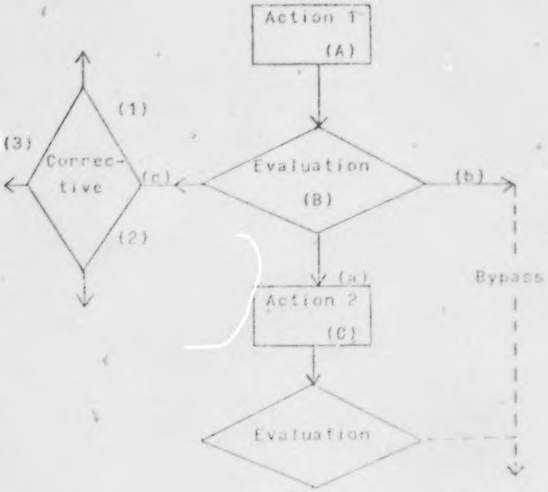
There is a National Teacher Examination which is used by schools and school districts for hiring teachers, and sometimes, for promotions. Data accumulated for over thirty years have some information focus. The weighted combination examination total score (WCET) has been correlated with GPA or grade point average in undergraduate school and with student teaching grades and with ratings by college teachers and administrator-supervisors during student teaching. As measures of concurrent validity only GPA, as reported in 16 studies, showed a moderate correlation. On measures of predictive validity in seven studies of ratings by supervisors and principals during the first year of teaching resulted in coefficients of validity ranging from .15 to .45 and after three years of teaching (based on only one study) .10. Thus, predictive validity has not been established.

The problem with the National Teacher Examination is the attempt to predict practice based on a test of knowledge. It appears that existing tests of knowledge are inadequate to predict readiness for professional practice.

With such dismal findings and forbodings, we look to the CBTE models as a better basis for prediction of readiness for professional practice, immediate or intermediate re: the time dimension. But first a caution stated succinctly by President Emeritus John Fischer of Teachers College, Columbia University, in his convocation address, May 1973.

> What I am arguing, you see, is that if our concept of accountability is to cover merely the technical aspects of education, or to deal only with those outcomes we are prepared to quantify, it will be worse than deficient—it will be dangerous. The aphorism still holds that what is honored in a nation will be cultivated there, but it appears also to be true that in a statistically oriented culture whatever can be tabulated, correlated, or computerized is likely to be accorded a certain preference. And from preference to deference is a short and easy step.
>
> Given the predisposition of our society and of our researchers, the quantifiable aspects of education will not be neglected. What might well trouble us, however, is the possibility that subjective forms of appraisal, being so easily contaminated by personality, will be discredited and discarded.

I should like to have you review schematically what adaptations can be made in a program when a systems design is employed. Assume that student, June, has been assigned to a resource room for her practicum. That is Action 1.



(Cooper et al, p. 83)

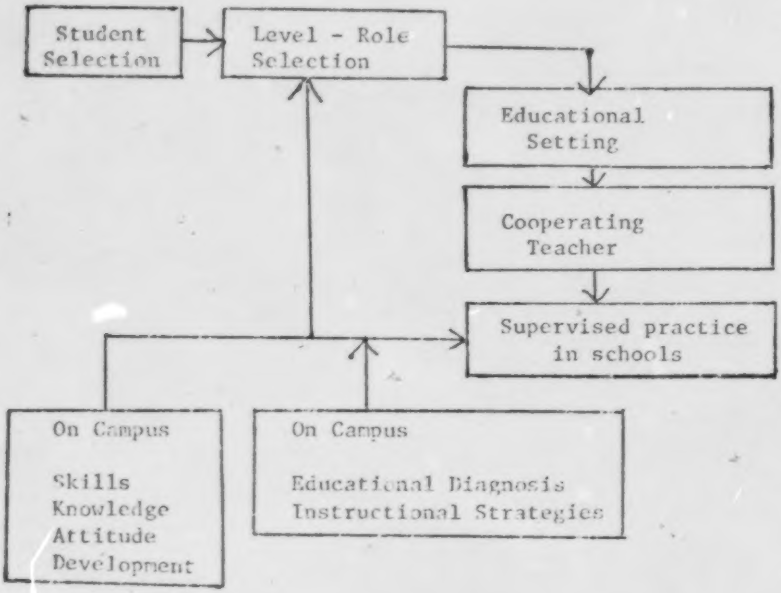
At the conclusion the experience is evaluated *B* which results in three options: *b* Bypass. June is allowed to proceed to an activity scheduled for a later period. For example, the student can proceed to an itinerant teaching assignment and is not required to spend all, of the assigned practice time in the resource room. This suggests possible redundancy in the experience planned. The second option is *c* Corrective. Since the competencies were not attained or not at the required criterion level, 80 percent, decisions have to be made. The experience can be modified, supervision can be increased, videotaping for self-criticizing can be regularly employed. That chain of action can be abandoned and a new series of activities in practicum designed. Or, the next action *C* can be modified and itinerant teaching, the next step, eliminated or placed in the time sequence at a different point. Or finally, June can progress to the next step, *C* a second resource room placement. The same decision making points can be reflected in terms of sequences of or clusters of competencies, or even time of presumed attainment of competence, for example.

Other feedback into the system programmatically includes a variety of inputs in type and style such as the level of professional performance at the end of the fifth or tenth year. To examine student progress through the system or program requires a quantity of information, particularly at critical points for decision-making, to be fed into the system for both individual and program in order that advisors can aid students in making decisions, to counsel wisely, to determine the effectiveness of specific modules within the program. The assessment of the student subsystems must provide information to the students, to the instructional staff, to the management staff or administration regarding the determination of efficiency of the program and its segments, its program outcomes, for curriculum design and modification, and for testing the several hypotheses upon which the program is based.

Since in P/CBTE programs emphasis is placed on student performance and the consequence of the student's teaching rather than on sheer knowledge a team of evaluators is usually involved. Decisions on student performance may include: (1) Self-assessment of competence of the total program, of a module, or of a specific competence through micro teaching, peer teaching, or videotaped lesson and critique; (2) peer assessment by critiquing lessons taught before group(s) of peers or on videotape; (3) and/or a team of evaluators: the university supervisor, the school supervisor, the cooperating teacher, and occasionally by the executive head. Program evaluation periodically by students includes a scale system against which the competencies intended to be developed in specific courses, in specific modules, or as the result of specific experiences are measured. Thus information or data are supplied on program elements, instructional processes, and personnel, although indirectly coupled with student performance demonstrating competencies.

There are several problems to be resolved in terms of student assessment. There are some competencies which seem to be best rated in clusters rather than singly. The question of the validity of the competencies themselves has yet to be determined nationally. The complexity of the evaluation process requires close communication between the cooperating teacher and the university supervisor in the translation of behaviors to competence. The design and development of entry and terminal tools for assessment require expenditures of time and money. The what, the when, and the why of decision-making in the assessment subsystem require more precise delineation by the field. Finally, it is the responsibility of the university to provide consistent feedback to the student and to facilitate the withdrawal or dropping of those students who fail to meet criterion. It is the responsibility of the school/program administrators to hire those graduates whose profiles indicate the competencies they have attained, the degree to which they were attained, and the educational settings in which the student functions competently.

Decision Points


Student Selection
Level - Role Selection
Educational Setting
Cooperating Teacher
Supervised practice in schools
On Campus
Skills
Knowledge
Attitude
Development
On Campus
Educational Diagnosis
Instructional Strategies

The points where decisions are made based on the data collected are several. In student selection the admission criteria must be met. Does the student meet the academic qualification? What are the personality characteristics? Is he committed to instruction of deaf children and youth? Are there facial characteristics which might impede communication? Is the person one of integrity? of energy? of warm personality? At the level and role setting are there master teachers at the level wanted and in the setting appropriate? If not then entrants to the program should be reduced. At the cooperating teacher point, many questions must be raised: Does the cooperating teacher work effectively with student teachers? Does he/she share the class with student teachers? Are there sufficient numbers of cooperating teachers? Obviously on campus there will be many measures of knowledge available, but the on campus skills in observed and guided instruction and limited diagnosis may reveal competencies at an insufficient level to permit the student to move into the classroom. Evaluation and assessment should, if practiced, raise the level of instruction to ensure more efficiently gained, and increased knowledge and skills of deaf children and youth.

SUMMARY

In this presentation we have examined the evaluation component and the assessment subsystem of an emergent P/CBTE program preparing personnel in the education of the deaf. Not included but of considerable significance in the evaluation component are assessment of on-the-job performance and of other behaviors, personality characteristics. Suggestions have been made regarding possible sources of assessment tools and strategies. At this point we should like to indicate some of the visible research needed. We urge strongly that researchers look at the (1) instructional process and design of P/CBTE programs, (2) the assessment and evaluation components of the P/CBTE or at last aid the teacher educator in designing techniques of assessing terminal behaviors through simulation, interaction analysis of specified teacher behaviors, on-the-job sampling, and (3) to undertake validation studies of competencies requisite for teachers of the deaf.

REFERENCES

Menges, Robert J. Assessing readiness for professional practice. *Review of Educational Research*, 45, Spring 1975, number 2, pp. 173–207.

Cooper, James, Wilford, Weber, Charles Johnson: *A system approach to program design*. Berkeley, California: McCutcheon Publishing Corp., 1973.

Creamere, John and Joseph Gilmore. *Design for competence based education in special education*. Syracuse, New York: Division of Special Education and Rehabilitation, School of Education, Syracuse University, 1974.

MANAGEMENT IN THE EDUCATIONAL SETTING

Doin Hicks, Ed.D., Dean, Pre-College Programs, Gallaudet College, Washington, D.C.

The management of organizations, as a discipline, has undergone extensive changes during recent years. As organizations change so must there be change in the manner in which they are administered. Change is influenced by many forces, but in general it is the stockholder or the consumer who creates the greatest influence. In the case of education the stockholders are the general public and the consumers are the students who move through the schools.

Participatory management

The role of the educational administrator is quite different than it was even a decade ago and it has become almost a boring redundancy to hear about how difficult and demanding it is. The need for significant change in administration at all levels in the educational system has been apparent. This change, however, for the most part has been for the good. The general public who support the schools, the students who are the recipients of the programs, as well as the faculty who implement the program have forced administrators to accept their voice and even their participation in the act of management. This has occurred in many instances after much painful experience, including confrontation of an emotional nature. Administrators, then, can no longer preach democracy, and practice autocracy.

People in educational institutions today are well up on the hierarchy of needs and they will not function at all well under autocratic management. In order to gain self-esteem and some self-actualization, a staff must be allowed to integrate their individual goals with the institutional goals. Getzels and Guba (1957) advanced a theory about the importance of the goals of the individual and those of an institution having some congruency for the good of both the individual and the institution. Today we can't argue with that theory.

It is imperative that we involve people in the decision-making process if their goals are going to be realized through the institution. This can be done by means of the administrative team. Wynn (1973) defines the administrative team as:

> A formally constituted, de jure body of administrators who exercise collaboratively all the administrative processes, goal setting, planning, organizing, coordinating, communicating, decision making, and evaluating. However, with rare exceptions, it does not direct programs within specific administrative jurisdictions.

For the purposes of this paper we subscribe to Wynn's definition.

If we are to improve organizations we must begin with the assumption that they are perfectable just as humans are perfectable. Such reform, however, must begin at the human level for it is people who make up the organization. If we assume further that broad participation in the management of an organization can contribute to the organization's effectiveness, then we must find ways to use all of the voices that wish to be heard. Many of these voices are in the form of pressure groups which can be very narrow in their thinking and approach, focusing essentially upon vested interests. The trick for the administrator, then, is to learn how to utilize his own staff as well as the external groups and publics surrounding the school and direct all of these strong forces in a positive way. The educational leader must be very skillful in moving groups away from insistence upon consensus over every procedural detail and the tendency to intellectualize every idea that comes along. Likewise, the administrator must have the ability to squelch the dominance of negativism and all of the incessant incriminations which could quickly cripple an organization. Such skills do not come naturally for most of us and must be learned in some organized and deliberate way. Most of us cannot afford the "school of hard knocks" to teach us the things we must know to manage an organization. Administrators now, and in the future, must be educational statesmen of the highest order. They must exert extensive effort to create a trusting environment. They must, at the same time, be strong enough to weather the long season of law suits, allegations and the sense of surveillance that exists from the various groups that surround the schools. Those who have been on the outside are going to get in, and they should; but administrators must be patient, honest and humane and must not be defensive in their efforts to help their organizations grow.

> The object: to increase the effectiveness of individual, group and intergroup relationships. The methods of change range from alterations in organizational structure, to management-development seminars, to sensitivity training and team building to name a fey. (Selfridge and Sokolik, 1975)

To paraphrase Selfridge and Sokolik (1975) it further helps to think of an organization as an iceberg with a visible portion and a hidden base. The visible portion consists of those things that have been formalized—the content—e.g., the organizational structure, the span of control, the stated objectives. The hidden part pertains to the informal structure, the feeling level—the processes. It is important to bear in mind that there is not a sharp demarcation between the visible and the hidden. One must think of the iceberg as a cork that is bobbing in the water so that the amount above and below the water line varies. There is actually some fusion taking place at the water line.

Organizational development

Within the behavioral sciences there is an emerging discipline with a body of knowledge and the requisite skills to assist the organization in utilizing both human and non-human resources to optimum advantage. This discipline is known as Organizational Development. Behavioral scientists specifically trained in the business of dealing with the problems of organizations and the people within them are rendering great service in assisting organizations to meet the challenge required within today's societal and economic milieu.

During the past two years the Model Secondary School for the Deaf located on the campus of Gallaudet College in Washington, has utilized the services of Organizational Development consultants as the school attempts to meet its difficult challenge. The multiple purposes of the school require that its organizational structure be somewhat complex, its staff of exceptional talent, and the products of its many programs to be of high quality. The school must be exemplary to the extent that its provides stimuli to other programs and furnishes models which are replicable in whole or in part. All of this is a challenge, and includes pressures to make it happen overnight! Assistance from organizational development consultants has resulted in permitting the Model Secondary School to develop its organization and begin to react to its challenges in a much more timely and qualitative fashion than otherwise would have been the case.

Based on the school's highly contemporary philosophy and its sense of need to utilize all of the human resources available, the decision was made early to assume a strongly participatory approach to management. This called for the utilization of management teams at all levels within the organization. Additionally, it required the development of an overall decision making model so that channels for the input from a variety of individuals and groups could culminate in decisions and resulting action on a timely basis. Such an approach to management does not diminish the importance of the administrator but does indeed change the administrator's role and can be highly traumatic for those who are accustomed to acting in a unilateral fashion.

Organizational Development consultants do not dictate the approach which an organization must take in managing its affairs, but rather work with the organization and the people therein within the particular philosophy of administration with which they feel most comfortable. The two major presentations which follow are by two distinguished gentlemen who work in the field of Organizational Development. They will provide first hand information as to ways in which the behavioral scientist can assist the organization in shaping itself in positive ways. Dr. Richard E. Byrd who is president of REB Associates, a behavioral science consulting firm, will provide a broad picture of how the behavioral scientist is able, through consultative services, to assist organizations and individuals within them to improve through the application of behavioral science techniques. Mr. Paul Rogers who is vice-president of REB Associates will make the final presentation. He will engage in a discussion and demonstration of specific techniques that the consultant would use to assist in identifying and remediating particular problems.

REFERENCES

Getzels, Jacob W. and Egon G. Guba, "Social Behavior and the Administrative Process", *School Review*. Winter, 1957, Vol. 65, pp. 423–441.

Selfridge, Richard J. and Stanley L. Sokolik, "When OD Comes to Our Company", *Supervisory Management*, Feb. 1975, pp. 24–34.

Wynn, Richard, "Theory and Practice of the Administrative Team", *National Association of Elementary School Principals*, Monograph, 1973.

THE SCHOOL ADMINISTRATOR: A PROPOSED MANAGEMENT MODEL

Richard E. Byrd, Ph. D., President, REB Associates, Inc.,
Minneapolis, Minn.

The role of Educational Administrators and, especially, those of schools for the deaf are in times of dramatic change. Educators of the deaf are profoundly questioning the autocratic administrator's ways of the past. Parents, also, are demanding greater emphasis on affective goals for their children who may learn the 3R's but are socially and affectively not able to take their rightful place in society. Old assumptions about learning and communication with and between deaf people are in flux. Philosophical conflicts exist among deaf educators over what constitutes good communication. The disagreements threaten to split school programs wide open. In the midst of these changes, the administrator of a school for the deaf is called upon for leadership, not just called upon, but called upon with some panic to provide meaningful direction. He is expected to set a reasonable course amidst the rocky shoals of teacher unions, government granting institutions, concerned and often better informed parents, deaf associations who differ among themselves, and the kids themselves who are difficult to handle; all disabilities aside simply because they are subject to the normal vicissitudes and developmental difficulties of children and adolescents. This paper sets forth a hypothesis regarding the administrator's role. Then I present the organization's characteristics which appear to us to be most capable of assuring the administrator of success as an educator where the odds, generally, seem to be against success. These characteristics are those which MSSD and Kendall Elementary School are implicitly and explicitly establishing in an attempt to develop a more responsive and growth-producing management.

The administrative role

Educational leadership today may be more akin to the classic role of statesman rather than administrator or ideological pace setter.

The statesman in this approach is the integrator of individuals and the organization. His job is continually to assist in the synthesizing of the different philosophies, career goals of the teachers, aspirations of parents, restrictions of government bureaucracies, etc. (Argyris, 1964)

In this role as statesman, he acts as an integrator who has some goals for which he consciously and unconsciously aspires and works. However, if the educator-statesman expects to be accepted in the role of integrator he will have to constantly face the tumultuous and differential demands of his various constituencies with consistent behavior that seeks to create a school organization that has: an organization-wide sense of mission or purpose; decentralized decision making;

candid communication, both lateral and vertical; collegial relationships; a common organization/management language; the recognition and management of conflict; constant clarification of functions and responsibility; and administrators who are reflective about their own behavior.

In this paper I want first to present some of the qualities of organizational climate and behavior that describe the substance of these goals. Then, Mr. Rogers will discuss a new set of education/organizational strategies we've used within schools for the deaf that can help the administrator achieve these characteristics within his organization.

Desirable organizational characteristics

1. An organizationwide sense of mission or purpose.—Most organizations that fail, either economically or in the quality of their delivery of service, do so for lack of a consensus about the nature of their business. Schools are by definition in an ambiguous business.

The loom upon which the school fabric is woven is constantly coming apart and should be expected to because of the complex, fragile and ambiguous nature of the teaching of deaf children. No recrimination is intended in these remarks toward any of those who participate in these unravelings.

Regularly, there are mothers angry at "unfair teachers," interdepartmental conflicts, gossip, advertent and inadvertent slights by administrators of teachers, kids hitting kids. All are part of the fabric that the statesman reintegrates and reweaves each week. The weekly management goal is to have emotionally and intellectually integrated the individual into the school's web of relationships in the most optimal way to accomplish the school's goals.

2. Decentralized decisionmaking.—In the ambiguous organizational climate of a school, if the administrator holds his cards too close to his chest it has deleterious effects on his colleagues.

The statesmanlike administrator decentralizes the decision making by true delegation, giving real authority to others, both individuals and groups. The exact nature of such delegation will be worked out in each administrator's situation. No exact formula of types of decisions, levels of decision making, etc., is possible without knowledge of the individual's capacities and expenses as well as the overall climate of the organization.

The point is that unless he "lets go" he will demotivate his staff because they will feel little ownership in the decisions that are made. Delegation should be discriminately and differentially accomplished. Discriminate, but err on the side of delegation so that your colleagues can grow.

Each administrator needs to plan and implement decentralized decision making bringing many relevant voices into the process. He needs to take into account the real world concerns such as the the potential resistance of his teachers and administrator to new responsibility in the form of decision making. In conclusion, his complicated job may be to educate his public to joint decision making; then establish forums for open discussion and, finally, to state the obvious when it emerges.

3. Candid communication, both lateral and vertical.—Most of us have learned from the cradle that candidly pointing out the other person's weaknesses may cost friendships or may put blocks in working relationships, therefore, we fear such open expression of feelings. The administrator who sets out to gradually create an atmosphere where increased candor brings rewards of both an extrinsic and intrinsic nature must be aware of these built in inhibitors and become the primary example of being open to the candidness of others with him, because he is the keeper of the seal. He sets the school's norm and if he is increasingly and caringly candid, others will follow suit.

He must, however, also find ways to create the same climate laterally. If different departments act autonomously with little communication, the lack of integration will show as they step on each other's best laid plans. Effective lateral communication and mutual critique can also lead to more creative programming. It is obvious that everyone on the organization is educated beyond their function. Lateral communication opens up opportunities for people outside their own departments to add additional input to other areas. In other words, lateral communication brings the entire organization's resources to bear on administration, curriculum and teaching problems. There is also the fact that department "a" may have some information that department "b" needs to know but won't like hearing. Without an acceptable norm of candid communication, department "b" will never learn because department "a" will not tell them, much to their later consternation and chagrin.

When administrators and teachers have social norms of candid communication in the organization, their modeling helps kids develop accurate feelings about themselves and others. When communication is fuzzy, affect is fuzzy. Without candid communication staff and kids may not know where they stand and both can feel quite isolated from others in the organization. The statesman-administrator then works toward a school climate that enhances, develops and supports a social norm of candid communication.

4. Collegial relationships.—Today's statesman-administrator will advocate for the quality of professional relationships becoming collegial. He will resist the bureaucratization of his role. True colleagues are integrated because they stand with you in a collaborative rather than combative relationship. The administrator with a collegial staff will receive information spontaneously provided because the staff will not feel the dramatic division so common in today's bureaucratic school organizations. His delegation of decision making will improve because he will automatically know who should be included in what social function, what decisions, etc. He will have the knowledge of his associates as people with all their weaknesses and strengths. He will expect personal relationships to be valued and will not avoid being close to his staff, although he will, of course, always be aware of how others knowingly or unknowingly try to inappropriately influence his thinking. That is the primary risk of the collegial approach.

Perhaps an even more difficult task for the administrator than managing his relationship is that of creating a climate where his colleagues ask for help and give help to each other. Where it is accomplished, such mutual relationships among staff model healthy affective relationships for the children. But how to do it, especially in the traditional schools for the deaf, is no mean task.

5. A common organization/management language.—The essence of rapid communication is when the language of the particular community means the same to most everyone. When I speak of a common language, I'm not just referring to technical words; but also management concepts of planning, organizing, leading, controlling, decision making, problem solving, etc., which are ways of organizing one's work. When everyone has some sense of what those words mean within a particular school culture, it increases the speed by which a task is accomplished. I'm sure you would each like to have a nickel for every argument you've overheard in schools over the meaning of a goal, a purpose, a method, etc. The language, or rather the commonly understood meanings behind language, facilitates the taks and provides a medium of exchange that enhances understanding and empathy between faculty and administration. The statesman-administrator helps the school to find verbal and written vehicles that then can become the coinage of rapid and meaningful communication.

6. Recognition and management of conflict.—In general, schools can be said to have passive-aggressive characteristics. In other words, teachers and administrators tend to repress hostile feelings, rarely engaging openly in conflict at the time they are experiencing anger at some major grievance. Then, perhaps, a staff may become very aggressive over a petty matter that should not really generate as much heat as it does. The administrator may be quite bewildered by the strength of the objection. He needs to simply recognize that he's dealing with delayed feelings that were stockpiled and are now being expressed inappropriately. To remedy this kind of latent expression of anger he should first not be co-opted by the staff to submerge negative feelings when they occur. Secondly, he should encourage a norm of being more spontaneous about conflicts so that anger and differences are dealt with appropriately and not submerged to fester and become organizational boils. Conflict is always present, developing and threatening to emerge at all times. This is because differences and anger are quite normal and, in fact, sources of creative energy. Realistically, however, the passive-aggressive organizational behavior in schools can probably only be modified. The administrator can only work toward improvement, not elimination of such dysfunctional organizational behavior.

7. Constant clarification of functions and responsibility.—Of the essence in integrating the industrial and the organization is the development of ways by which functions and responsibilities are continually clarified. For in an organization that has an ambiguous task, the ambiguity tends also to spread to each person's sense of what he is supposed to do. I'm not here advocating more job descriptions projects. What I'm saying is that the administrator has an opportunity to decrease the dissonance caused by lack of clarity by the following: (a) First, by keeping his responsibility and functions clear between himself and his deputy and/or staff. The more explicit the better, and reviewed regularly. (b) He also needs to encourage a regular face-to-face among others who normally relate to each other in carrying out an overlapping mission. I'm suggesting here that the integration of people's jobs through differentiation of responsibilities and functions can only be really accomplished in a face-to-face by people who are willing to be flexible and pragmatic when the organization tasks are so nebulous and integrated. The administrator can set the pace by regularly reviewing the confusion in his own shop and providing time for others to do the same. The main point I'm pursuing is that the administrator should not take for granted that such integration is taking care of itself.

8. Administrators who are reflective about their own behavior.—Every organization needs to have administrators who are reflective on their own style and motivations, but this characteristic is required in the statesman-administrator. The administrator is alone; a unique figure often linking teacher to teacher, school to parent, and school to higher authorities. Playing the role of a statesman means that the administrator must understand himself and his motivations in order to understand others. The basis for accepting other's aggression is his understanding of his own. His recognition of the isolation of people in the organization comes from his awareness of how he feels. His recognition that others may see biases in him that he doesn't, will allow him to be more fair, more open to mid-course correction, and to be a model for his colleagues. Because of his seeking for self-understanding, the statesman-administrator is reflective and knows "nothing" may sometimes be preferable to "anything." The old adage, "Don't just stand there, do something" is symptomatic of an unreflective administrator.

Summary

To summarize, then, the proposition this paper addresses is that given the task of integrating the individual and the organization, the administrator of a school is to act as an educational statesman. His goals will be to (1) develop a consensus regarding the school's mission; (2) help his colleagues learn to make decisions that reflect that mission; (3) develop personal and organizational "truthtelling" behaviors that model candidness for both children and staff; (4) encourage professional relationships rather than relationships between "levels" of the organization; (5) help the organization find and share the meaning behind the common words used to describe their task; (6) establish a practice of early recognition and management of conflict; (7) continually clarify what he's doing as it relates to others and helping others to do the same; and (8) be reflective regarding his own needs and decisions.

These, of course, are goals for the administrator pursuing the function of statesmanship which is the hypothesized role for the administrator in these times. These goals will never be totally achieved, but to the extent the administrator can internalize these goals reflecting how he values them through his behavior, the more potential there is for the individual and organization to experience a synergistic quality among its resources in carrying out the challenge of educating children and adolescents.

BIBLIOGRAPHY

Argyris, Chris. *Integrating the Individual and the Organization*, New York: Wiley, 1964.

Byrd, Richard E. *A Guide to Personal Risk Taking*, New York: American Management Association, 1974.

DEVELOPMENT TECHNIQUES

Paul Rogers III, Executive Vice President, REB Associates, Inc., Fairfax, Va.

Dr. Hicks has described the dilemmas and challenges of the evolving role of educational administrators. Dr. Byrd has followed up with a model of organization administration that implies a long range development strategy. If the role and its subsequent dilemmas, and the model presented here ring true to you in some way, the question remains, "What tools are there to assist administrators in achieving their goals over several years?" I am going to list a myriad of approaches, based on organization development techniques, that have been used both at Kendall Demonstration Elementary School and Model Secondary School for the Deaf.[1] Each of these has been used when approved by the administration as being appropriate to the school's emerging need. I am not presenting them hierarchically in value or suggesting a proper sequence.

Team building.—One of the major techniques used today is team building or team development. Team building is a process by which members of a temporary or permanent group take on the responsibility of not only accomplishing their task but also sharing in the responsibility for the effectiveness of the process by which the task gets accomplished; in other words for useful working norms being developed and reinforced.

Our task at Kendall and MSSD has been to assist the top administrative teams in (a) clarifying their purpose, (b) identifying the best procedure by which the team can influence each other and utilize their resources, using effective problem solving approaches, developing a healthy trust relationship among the group members, and reaching jointly agreed upon decisions.

Team building is directed by the administrator and his/her team, and facilitated through the assistance of a consultant. In MSSD, team building has been done with various administrative teams. Sometimes these sessions take place on campus. Most often they are two to three days spent in a retreat setting and preceded by an interview process during which consultants gather data which are presented anonymously at the retreat setting. Several retreats have to be planned during the first year. Friedenlander[2] (1967) found that administrators attending team development sessions reported that their participation, personal involvement, mutual influence, and problem solving effectiveness had increased more than those of managers in control groups without team development.

Management coaching.—In both Kendall and in MSSD, REB Associates has assigned a senior consultant to assist senior administrators in a one-to-one coaching relationship, which usually takes place in the administrator's office. The content of these one-to-one meetings varies according to the pressures being placed upon the administrator at any given moment. The general thrust of management coaching is to help the administrator understand his own personal impact in any given situation. And further, to factor that impact into any decision or action. Sometimes the consultant will observe the administrator in a group setting and later provide feedback on behavior or procedures that create new options for the administrator.

Coaching many times comes in the form of describing alternative approaches to solving certain problems or making certain decisions.

---

[1] For further information on these and other approaches see Managing with People: Managers Handbook of Organization Development Methods by Jack K. Fordyce and Raymond Weil, published by Addison-Wesley Company, Reading, Massachusetts, 1971, and Organization Development: Strategies and Models by Richard Beckhard, published by Addison-Wesley Company, Reading, Massachusetts, 1969.

[2] Friedenlander, F. 1967. "The impact of organizational training laboratories upon the effectiveness and interaction of ongoing work groups." *Personnel Psychology* 20:289-308.

Key questions such as "should you be making this decision?", "What are the risks of making decision A in relationship to the pay offs?" In other words, "what's the risk?" Many times the consultant will assist the administrator in sorting through his own feelings about a particular decision or dilemma, and assist the manager to factor in his/her own intuition about what seems to be the "right" move. Coaching presumes that growth in the administrator will have a multiple effect for the school.

Structural.—At Kendall School, an attempt has been made organizationally to place certain key individuals on both major administrative and instructional teams, thus developing a linking pin concept of organizational structure. For example, the director of the Instructional Division for Kendall School serves on the Instructional Management Team, consisting of the program supervisors for the different educational areas, and also serves on the Administration Management Team alongside the director of Student and Family Services, the director of Evaluation and Development, and the director of Research and Dissemination. The attempt here was to build an organization that could take advantage of the human link-up. This allows both teams to manage both the formal and informal aspects of the school and to be involved with each other on a personal basis. A consultant may create models for administrative considerations or simply sit as adjunctive staff with the administrator.

In both MSSD and Kendall School the respective top management groups were assisted in the planning and installation of a process by which participants in the school could have input into alternative ways of organizing the school in the best possible way. As a result, both staffs of both schools have more investment in the successful functioning of a fairly sophisticated organization. Even though in both cases the final structure was not what the respective directors might have designed by themselves, both structures are workable and, more important, there are several people in both schools who have pride of ownership and are committed to make the structure work.

Action research.—In both schools a variety of techniques has been used to assist managers and teams to manage from data that have been systematically gathered. The process here is very simple. On any given issue such as teacher evaluation, planning, or tenure, techniques are developed to retrieve information from personnel regarding any certain issue. Then that information is presented to individuals and groups in such a way that they can effectively problem solve and come out with action items. Immediately after the action is taken another attempt is made to assess the impact of the action in order to then again do some more problem solving. Consultants are constantly assisting in this cyclical management style.

Management work conference.—During the summer sessions, time is available for management work conferences. These are two to four day sessions where several consultants assist the managers of major teams in task oriented off-site meetings. The effort here is to combine actual staff work with theoretical and management input and assistance from consultant teams. In the case of Kendall School, in July of this year the top Administrative Management Team and the Instructional Management Team will spend four days trying to anticipate exactly what the demands will be on the school on a month-by-month basis for an entire year. The outside consultants not only provide different frameworks within which to do planning and problem solving, but will also offer feedback on individual's personal styles as members of problem solving groups.

Conceptual intervention.—A basic stereotype of a behavioral science consultant is someone who works on the "feeling level." It is important to note that in our work with MSSD and Kendall School one of the major areas where organization consultants have had responsibilities is for input in the realm of conceptual interventions. In other words, sharing with the client developed theory or frameworks within which the client might see his/her dilemma in a new way; in a way that informs and encourages action.

Conflict resolution with third party assistance.—This is usually done on an organic basis. That is, as the school moves through its day-to-day life, major conflicts emerge. Sometimes a consultant is called into the situation when administration biases or skills prevent them from being helpful or at least perceived as helpful. The consultant then assists the groups or individuals to fully articulate their side of the conflict and to understand more completely not only the other side of the conflict but the perceptions of both parties. Meetings are held to surface the conflict so that both the feelings and the facts in any given situation can be worked on in an open forum. One of the attempts here is to allow conflict to be seen as a normal, useful part in managing the school.

Personal and professional career consultation.—Many applied behavioral scientists come from a human relations training background. This offers the respective client an opportunity to receive suggestions about possible career opportunities in human development training by someone who has a broad range of training experience. The behavioral science consultant can suggest professional growth experiences for personal, interpersonal and organizational training that might not otherwise be known of or suggested to administrators.

Co-lateral organization.—In problem solving it is often useful to back away from people's "formal" role in an organization. Most issues or problems of schools are multi-dimensional. They affect people at all levels of the organization. Therefore, one of the common techniques in the ongoing organization development work at Kendall and MSSD is the setting up of co-lateral problem solving groups. Co-lateral groups are also an excellent way of continually assessing where the formal and informal organization currently stands through a process of ongoing meetings with co-lateral sensing groups.

Development of management systems.—At MSSD an REB consultant assisted in the development of several specific management systems. One example of this technical assistance was the development of a Project Management System. An REB consultant worked alongside internal MSSD staff in the development of a system by which individuals in the school could propose new activities and those activities could be analyzed and channeled into an overall management plan. The consultant helped the internal group assess the advantages and disadvantages of this style of management, assisted in the development of an overall model, and aided in the development of specific components of the model including: Selection of projects and process of project development, implementation and evaluation—initiation of project ideas, development of project outline, decision to grant project status, selection of project leader and staff, project planning, review of the plan by top Management Team, implementation of the project, progress review, evaluation of the project, and roles and responsibilities. Consultant assisted in the development of this specific management tool that took into consideration all of the other interrelated aspects that needed to be considered in installing the system.

Another example of assistance in developing a management system was the development and installation of the MSSD "Operational Plan Process." In assisting in the development of this process, REB consultants used a variety of organization development techniques. First of all, we assisted in setting up a co-lateral organization two day meeting to reach agreement on the top four or five major objectives for the year and integrate into those objectives the specific strategies initiated by the staff. After the co-lateral organization had decided upon the basic objectives and their scope, an "advocate" for each one of the objectives was selected. These advocates were then given specific one-to-one consultative assistance by an REB consultant. A general process was set up to help each one of the advocates. This process included assisting the advocate to utilize the services of interested people in developing a force field analysis of each specific objective. This was done in the following manner. Members from different parts of the organization were asked to come to meetings and identify "What are the forces and behaviors in the school that are assisting us in the accomplishment of the task?", and, "What are the forces and behaviors in the school that are impeding the accomplishment of this priority objective?" After this analysis of the forces surrounding each one of the objectives, the respective committees then developed an action plan that was finally presented to the top Management Team. The important thing to note here is that these techniques offered an opportunity for individuals to integrate their personal opinions, desires, and energies into an overall system that resulted in an operational plan. Staff members have pride of ownership and therefore built in commitment. Assisting managers to capture and utilize the self-motivated energy of his/her staff is a prime approach in the development or organization.

Organization clinic.—In both MSSD and Kendall School, REB Associates has provided a multi-disciplinary organizational consulting team. Each member not only is responsible for delivering his/her specific resource to the respective schools, but also shares in a periodic (quarterly) organization clinic session.

The team comes together and shares the information and insight they have as a result of working in their assigned areas. They then take a look at the total organization. They look both at individual and organizational behavior and identify developmental themes that may need to be addressed. A consultant, who has no other contact with either school, assists the team in this important clinical step. The results of these meetings are then fed back at appropriate times to the school's administration.

Process consultation.—Due to the ambiguity of the teaching task, the lack of discrete responsibilities and the pressures of teaching, communication in groups is not always the best. People are often unaware of or unskilled at maintenance of effective group behavior. A consultant has often helped at MSSD and Kendall by intervening in a work meeting to make observations on the group's process. The group may consider the comments or reject them but the consultant serves as a catalyst for the group to pay greater attention to the way they are working together.

Summary

We have outlined three key areas of modern management in an educating setting:

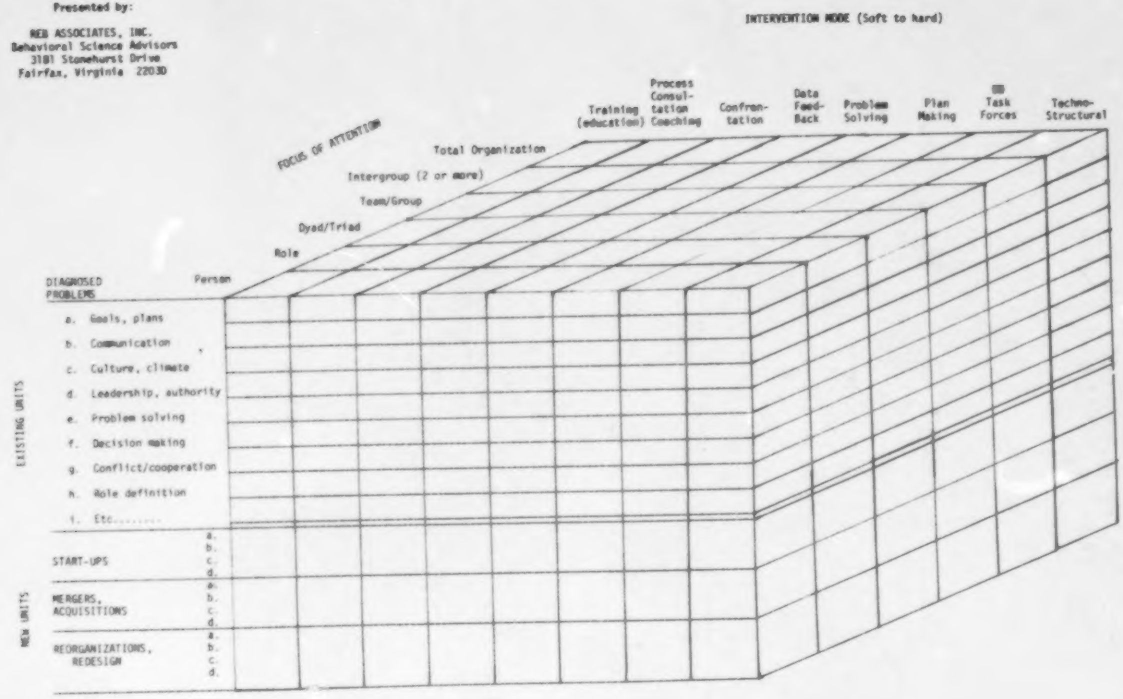
First, Dr. Hicks has defined the emerging role of an educational administrator as an "educational statesman" of the highest order. The task of an educational statesman is to learn how to utilize the people resources at his command, to orchestrate and focus, in a positive fashion, input from the broad interest groups and public connected to the educational institutions.

Secondly, Dr. Byrd suggests that a major role of the educational statesman is to constantly face the tumultuous and differential demands of his various constituencies with consistent behavior that seeks to create a school organization that has: an organization-wide sense of mission or purpose; decentralized decisionmaking; candid communication, both lateral and vertical; collegial relationships; a common organization/management language; the recognition and management conflict; constant clarification of functions and responsibility; and administrators who are reflective about their own behavior.

Finally, Mr. Rogers has described a myriad of techniques developed from a discipline known as Organization Development. These techniques were employed at the Model Secondary School for the Deaf and Kendall Demonstration Elementary School with the assistance of external professional consultants under the guidance of the respective administrators of the two schools. These techniques include: team building, management coaching, structural reorganization, action research, management work conference, conceptual intervention, conflict resolution with third party assistance, personal and professional career consultation, co-lateral organization, development of management systems, organization clinic, process consultation.

Presented by:

REB ASSOCIATES, INC.
Behavioral Science Advisors
3181 Stonehurst Drive
Fairfax, Virginia 22030


INTERVENTION MODE (Soft to hard)
Training (education)
Process Consultation Coaching
Confrontation
Data Feed-Back
Problem Solving
Plan Making
Task Forces
Techno-Structural
FOCUS OF ATTENTION
Total Organization
Intergroup (2 or more)
Team/Group
Dyad/Triad
Role
Person
DIAGNOSED PROBLEMS
a. Goals, plans
b. Communication
c. Culture, climate
d. Leadership, authority
e. Problem solving
f. Decision making
g. Conflict/cooperation
h. Role definition
i. Etc.........
EXISTING UNITS
START-UPS
MERGERS, ACQUISITIONS
REORGANIZATIONS, REDESIGN
NEW UNITS
a.
b.
c.
d.

THE O.D. CUBE: A scheme for classifying Organizational Development interventions.

M. B. Miles 4-30-70

EFFECTIVE SIGN COMMUNICATION FOR INSTRUCTIONAL PURPOSES: MANUAL ENGLISH AND AMERICAN SIGN LANGUAGE

Gerilee Gustason, Ph. D., Assistant Professor of Education, Gallaudet College, Washington, D.C.

Roslyn Rosen, M.A., Communication Specialist, Model Secondary School for the Deaf, Washington, D.C.

A few years ago, when life was more simple, we could talk about "sign language." In recent years, the upsurge of interest in visual media and modes, including signs, for communicating with the deaf child has led to studies of what exists in manual communication and what could be provided for better communication and better education.

Accordingly, it is no longer enough to speak of "signs" or "manual communication." We need to clarify what type of manual communication we are talking about, and determine what we wish to use in a given situation, with a specific deaf child or adult or a specific group.

Although many people have their own labels for different types of signs, and variations are the rule rather than the exception, we have found it helpful to speak of a sign language continuum because there is no sharp division between elements or modes. Briefly, the elements are: pantomine, in-group signs, American Sign Language, Sign English, Manual English and fingerspelling.

1. Nonverbal communication or pantomime

This means the gestural use of the body and hands and utilization of facial expressions and moods.

2. In-group signs

a. Home signs may be defined as those signs that follow natural gestures and often develop within the family unit for basic communication purposes, if no formal sign models are available—or as family "secret jokes" or references outsiders would not understand. These may refer to people or places or actions (e.g., McDonald's, grocery shopping.)

b. School signs often develop within a school program for inter-child comunication, to a greater or lesser degree depending upon the amount of exposure the child has to more standard signs. Such signs may not be understood by the deaf adult community in the surrounding area if there is little or no contact between the two groups.

c. Local signs refer to vocabulary that varies depending on the area in which one lives. In English we may speak of a sandwich as a grinder, a submarine, a hoagie, a hero. In signs there may be similar variants depending on geographical area (e.g., football, goat, recess, chocolate.)

3. American Sign Language, Ameslan, or ASL

This has come in for an increasing amount of study in recent years aimed at analyzing the rules of grammar that exist in this language. Research is turning up definite grammatical principles that are often completely unrelated to the grammatical rules of English—such as reduplication (of nouns to show plurality, of verbs to show continuing or habitual action), directionality (to indicate the subject-verb-object relationship, for instance), and word order (e.g., chronological order or the placing of the most striking feature first.)

4. Sign English

Most of us use the traditional signs of Ameslan but in simultaneous communication which is based on English, we sort them out according to English word order. This becomes a sort of pidgin language, taking its vocabulary from Ameslan and its structure from English, and we will refer to this as Sign English.

5. Manual English

We come now to the reasons for the development of new signs, and systems known variously as Signed or Manual English.

The basic rationale for these systems comes from dissatisfaction with poor educational showing of many deaf children, the need for input before output can be expected, and the lack of ease and clarity in the presentation of English through other visual modes. Regarding the poor educational showing, we should note a few typical research findings concerning the reading and language abilities of deaf children over the years:

Reading achievement scores and language test scores for the deaf have been uniformly low for at least fifty years, those of older deaf students hovering around the level attained by fourth and fifth grade hearing children. (Wrightstone, Aranow, and Muskowitz, 1963; Office of Demographic Studies, 1969; Goetzinger and Rousey, 1959, Pugh, 1946).

Some thirty percent of deaf students aged sixteen and older were classified as functionally illiterate by Boatner (1965) and McClure (1966).

It is interesting, also, to note the areas in which deaf children exhibit English problems:

1. They omit necessary words and use wrong words, these errors comprising approximately half of their syntax errors (Thompson, 1936; Myklebust, 1965).

2. They use sentence structures simpler and more rigid than those of hearing children, those of 17-year-old deaf students comparable to those of eight-year-old hearing children (Heider and Heider, 1940).

3. They learn lexical meanings more easily than structural meanings (Hart and Rosenstein, 1964), indicating their inability to deduce meaning from context.

4. No consistent pattern of development is exhibited by deaf children in the mastery of inflections or structure (Cooper, 1965) and they use fewer adverbs, auxiliaries, and conjunctions than do hearing children (Simmons, 1962).

Compare this to studies on normal language development in hearing children: These children have mastered a great deal of the structure of English, including basic sentence patterns and inflections, by the age of three; their language is fairly stable by age six, and language habits are extremely difficult to modify after the age of puberty. Between two and three years of age, a great jump is made, including the development of prepositions, demonstratives, auxiliaries, articles, conjunctions, possessive and personal pronouns, the past tense suffix, the plural suffix, and the possessive suffix. (Braine, 1963; Brown and Bellugi, 1964; Cazden, 1968; Slobin, 1965; Velten, 1943; Weir, 1962; Penfield, 1964; Hockett, 1950; Labov, 1965; Morkovin, 1963.)

A child learns the language of his environment as he perceives it—be it French, Chinese, Russian, standard or nonstandard English. The question then was how to present clear, unambiguous standard English to the learner.

Speechreading, while a valuable tool for communicating with a hearing world, involves considerable educated guesswork. Problems include:

1. 40 to 60 percent of the sounds of English look like some other sound on the lips.
2. Words ignored or missed are often structure of function words—verb endings, articles, etc.
3. It requires a knowledge of language to fill in the gaps caused by the two problems above.

Reading and writing lack spontaniety, portability, and naturalness. In addition, since a child's eyes do not fully acccommodate till age 8, (as evidenced by large print readers for the young) there's a perception problem.

This perception problem also affects fingerspelling. In addition fingerspelling is often monotonous and fatiguing to watch, has little visual imagery to compare to tone of voice and involves fine muscle control infants do not develop for some time.

Sign English, as noted above, does not present a clear, grammatically complete version of English. Accordingly, in varying degrees, new sign systems attempt to provide manual signs to supplement already existing signs and increase the input to the child of both vocabulary and English markers, word endings, pronouns, and other structural elements. These additions take several forms:

1. word endings, affixes, verb tenses.
2. the creation of signs for English words previously having no signs (fruit, vegetable, parent, toy).
3. the use of initials with base signs (family, begin, make) and the creation of sign families for words similar in meaning and sharing a common traditional sign. One of them will retain the traditional sign, the others will be given a new hand shape. (happen, *l*uck, *c*hance, *e*vent, *occur*, *r*esult; *think*, *r*eason, *w*onder; *friend*, *a*cquaint, *m*ate, *n*eighbor, *r*elate; *class*, *g*roup, *f*amily, *t*eam, *o*rganize, *s*ocial, *f*oru*m*, *w*orkshop; *town*, *c*ity, *v*illage; and so on.)

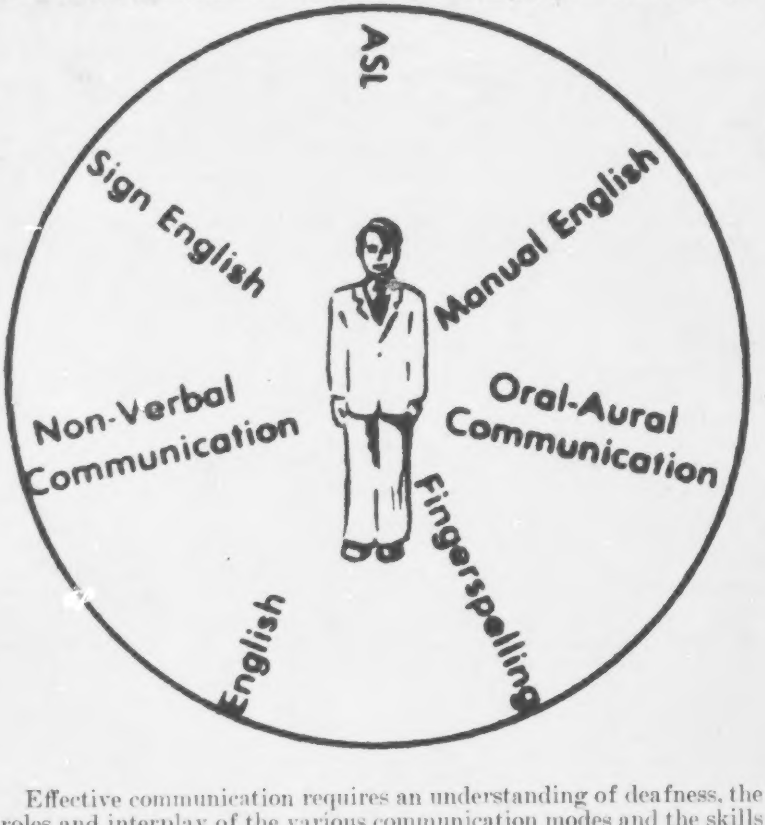
The philosophies followed by various new sign systems include greater or lesser adherence to what may be called a one sign—one word rules, and differences in degree of departure from traditional Ameslan signs. We have neither the space nor the intention here to go into the difference among the various new sign systems, but mention should be made of four major published systems: (1) The Gallaudet Preschool Signed English program; (2) Seeing Essential English; (3) Linguistics of Visual English; and (4) Signing Exact English;

In the summer of 1973 the Gallaudet Department of Education sponsored a two-week workshop on these four systems, and principals involved in each contributed papers detailing their philosophies and principles. These have been published under the title "Recent Developments in Manual English," available from the Gallaudet bookstore.

It is our contention here that the hearing impaired child should have access to every means of communication that he can. Accordingly, we stress his right to speech and speechreading training, to "ingroup" signs relating to family and peers (much like teenage slang), to a clear representation of English, and to the rich heritage of visual graphics presented by Ameslan.

In actuality, the elements of the continuum are rarely used in isolation or to the exclusion of the other elements. We call this spectrum of available modes or the combinations, the Communication Consortium. We believe that a total involvement in communication can draw upon them all and will enrich the child's communicative and language growth, and that Ameslan, besides being a vivid language in its own right, can add color, visuality and clarity to Manual English. We would like to see child, parents, and teachers learn them all.

COMMUNICATION CONSORTIUM



Effective communication requires an understanding of deafness, the roles and interplay of the various communication modes and the skills of relating these to the abilities and needs of the other person and his/her situation. The deaf person is visually oriented and dependent to a large degree on facial expressions and movement in absence of vocal intonation to receive the finer shades of meaning. Vivid action or key words and inflection in terms of rate, size and directionality, make a greater impact on the deaf person than do English words, some of which do not directly carry weight or enhance understanding (such as articles, word endings, and such) especially when strung together by a poker-face speaker with dead hands.

What we would like to touch upon now is effective visual communication for the deaf, applying components of basic ASL principles to Manual English, to have the best of both languages available to the deaf child. Here are some examples:

1. Combination of ASL concept visualization with Manual English one word-one sign principle: The English word "run" has dozens of different meanings and an equal number of ASL signs. The deaf child often is not aware that these different signs are linked to one English word; on the other hand, the rigid use of only one English sign for all contexts may lead to misunderstandings or cut down on the rate of learning and effective communication since the incidence of word input is lower for the deaf. We suggest that the teacher sign all the words and dramatize, either in pamomine or ASL, the key concept. For example, "Your nose is running." The teacher can use both the Manual English (ME) sign (run-ing) and then dramatize with the traditional ASL sign of a dripping nose. "My car is running (run-ing) smoothly now. (ASL-engine purring away)" "John is running (run-ing) for President. (ASL-applying or racing)". "My stocking has a run (run) (ASL-rip)".

2. Combination of ASL repetition for plurality, habit, difficulty and duration with Manual English word ending: The sign can be repeated but the word is usually said once.

Examples:

Plurality: The stories (story-story-s) are good.
Habit: My father always watches (watch-watch-s) TV.
Difficulty: I worked (work-work-ed) hard yesterday.
Duration: I am learning (learn-learn-ing) a lot in this course.

3. Utilization of the three-dimensional qualities of ASL directionality and sight-line when using Manual English:

Directionality.—John gave the book to me. ("give" is signed from the giver to the recipient.)

Sight-line.—John sees Mary who is sitting in a chair. ("see" is signed from John at eye-level to Mary at chair-level.)

4. Utilization of ASL inflection to show size, rate, intensity, comparison and as a substitute for vocal inflection: Position, execution and expressiveness of the sign must correspond and approximate the concept being conveyed.

Example: "He lives in a big house." (Big may be emphasized with an exaggeration of the sign and/or an accompanying facial expression.) "He ran for dear life." ("ran" is signed very quickly and in the appropriate direction). He talked and talked . . . ("talk" is repeated and repeated, the rate relating to speaker's speed and listener's level of interest).

Other important ASL elements include setting the stage and establishing positions, adhering to logical or chronological time sequences, knowing ASL signs and idioms, and so on.

The above illustrates only a few examples of how an understanding of and proficiency in ASL principles will lead to effective English communication skills for and with the deaf.

So far we have spoken in terms of young hearing impaired children. These elements of a communications consortium would be equally helpful, although the degree and manner of use would vary, in teaching English to older deaf persons. In this case it has proved very helpful to make use of English as a second language technique.

We do not advocate wholesale teaching of new sign systems to those who work with deaf adults, but we do urge that those involved with education of the deaf become aware of the entire continuum, and decide what they wish to use with whom and why.

Thus we cannot deemphasize the importance of knowing and feeling comfortable with both the American Sign Language and Manual English. This will lead to better communication skills on the part of both parents and school staff, and afford the deaf student increased educational opportunities and greater flexibility in social interaction. Bilingual education for the deaf is highly desirable, but since this is a relatively new idea on the school level, many questions and possibilities surround bilingualism in terms of educational principles, programs, procedures and implementation. We educators of the deaf have ahead of us an exciting and challenging new field open for exploration and discovery towards the goal of helping the deaf student to become a truly bilingual person.

BIBLIOGRAPHY

Boatner, E. B. The need of a realistic approach to the education of the deaf. Paper given to the joint convention of California Association of Parents of Deaf and Hard of Hearing Children, California Association of Teachers of Deaf and Hard of Hearing Children, and the California Association of the Deaf, Nov. 6, 1965.

Braine, M.D.S. "The otogeny of English phrase structure: the first phrase," Language, 39:1–13, Jan.–Mar., 1963.

Brown, R. and U. Bellugi. "Three processes in the child's acquisition of syntax," Harvard Educational Review, 39:133–152, Spring, 1964.

Cazden, C. B. "The acquisition of noun and verb inflections," Child Development, 39:433–448, June, 1968.

Cooper, R. L. "The ability of deaf and hearing children to apply morphological rules." Unpublished doctoral dissertation, Columbia, 1965.

Goetzinger, C. P. and C. L. Rousey. "Educational achievement of deaf children," American Annals of the Deaf, 104:221–231, 1959.

Hart, B. O. and J. Rosenstein. "Examining the language behavior of deaf children," The Volta Review, 66:679–682, 1964.

Heider, F. and G. Heider. "Comparison of sentence structure of deaf and hearing children," Psychological Monographs, 52:42–103, 1940.

Hockett, C. F. "Age-grading and linguistic continuity," Language, 26:449–457, 1950.

Labov, W. "Linguistic research on the nonstandard English of Negro children," 1965 Yearbook, New York Society for the Experimental Study of Education, pp. 110–117.

McClure, W. J. "Current problems and trends in the education of the deaf," The Deaf American, 1966, 8–14.

Morkovin, B. V. "Helping the deaf child toward adequate language and speech," Journal of Rehabilitation, May–June, 1963.

Myklebust, H. R. Development and Disorders of Written Language: Volume One, Picture Story Language Test. New York: Grune and Stratton, 1965.

Office of Demographic Studies. Summary of Selected Characteristics of Hearing Impaired Students, United States: 1969–70. Series D, No. 5. Washington, D.C.: Gallaudet College, June, 1971.

Penfield, W. "The uncommitted cortex: The child's changing brain." The Atlantic Monthly, 77–81, July, 1964.

Pugh, G. S. "Summaries from appraisal of the silent reading abilities of acoustically handicapped children." American Annals of the Deaf, 1946, 91, 331–349.

Simmons, A. A. "A comparison of the type-token ratio of spoken and written language of deaf and hearing children." The Volta Review, 64:417–421, 1962.

Slobin, D. "Grammatical development in Russian speaking children." The Development of Language Functions, ed. Kalus F. Riegel. Report #8, pp. 93–102. Ann Arbor: University of Michigan Center for Human Growth & Development, 1965.

Thompson, W. H. "An analysis of errors in written compositions of deaf children." America Annals of the Deaf, 81:95–99, 1936.

Velten, H. V. "The growth of phonemic and lexical patterns in infant language," Language, 19:281–292, 1943.

Weir, R. Language in the Crib. The Hague: Mouton and Company, 1962.

Wrightstone, J. W., M. S. Aranow, and S. Muskowitz. "Developing test norms for the deaf child." American Annals of the Deaf, 108:311–316, 1963.

Thursday, June 26, 1975

TOPIC: The Learners: Participating in a Learning Society

THE EVOLVING ROLE OF GALLAUDET COLLEGE

Edward C. Merrill, Ph. D., President, Gallaudet College,
Washington, D.C.

Colleges and universities are social institutions. By this, we mean that they are both of and for society. They exist in our society, and they serve those purposes which meet particular needs within society. Although colleges and universities have interesting traditions and are often viewed as stabilizing institutions within society, they must be responsive to the changing needs of people and groups within society or they become increasingly less relevant, obsolete, and support for them begins to wane.

Although we know both society and the institutions which serve society are in a constant state of change, the changes can best be seen in some historical perspective. As we draw closer and closer to our time, the changes are more difficult to see, and we are less sure of them. Needless to say, our projections of changes for the future are always speculative, but it helps to project the mission of the college into the future and to endeavor to relate it to presumed needs and changed life styles of our sons and daughters and their children.

The bold idea

When Ralph Waldo Emerson was putting pen to paper in order to express American ideals in his Essays, even high school education was not freely available to all, and postsecondary education was limited to mainly academies and private colleges and universities. After the Morrill Act was passed in 1866, the Land Grant Movement began to grow, and many more persons began to have access to more advanced studies.

It was during this time, 1864, that the Columbia Institution for the Deaf and the Dumb carried out a very bold, controversial idea. An Enabling Act was passed by Congress and signed by President Abraham Lincoln which gave the Columbia Institution the right to award degrees to deaf persons. Could people who are deaf and who may not have speech at all successfully attend college? Why would a deaf person want a college degree? What would a deaf person be able to do after receiving a college degree? These and other questions surrounded this bold act.

Gallaudet College accepted deaf students, communicated clearly with them, provided a liberal arts curriculum, and produced for the first time college educated persons. The bold idea worked.

Growth and criticism

During the presidencies of Dr. Edward Miner Gallaudet and Dr. Percival Hall, Gallaudet College grew slowly. This relatively slow growth continued under Dr. Leonard Elstad from 1945 to 1955. The College then entered into a time of expansion of its physical plant, and enrollments began to increase rapidly. As is often the case, growth and change are misunderstood. Some alumni, several superintendents of state schools for the deaf, and well-meaning friends of the College felt that growth meant lowering standards and that the growth of the faculty in both members and quality were not keeping up with the growth of the student body. Difficult years followed as the College grew steadily and responded to its critics. In retrospect, the criticism was largely unfounded and did no permanent damage to the College. And this period of growth is very significant for it was the time in which many deaf young people had access to a good college of liberal arts. We know this, for the graduates of these years are now the leaders we see and work with today.

The test

Gallaudet College grew in stature and increasingly met a national need. Students came from virtually every state and several foreign countries to pursue a college education. But was it really a college education? Yes, it is called a college but how do we know that the curriculum, the instruction, and the results are comparable to those of other colleges and universities?

In 1957 Gallaudet College underwent an accreditation review and was given full accreditation by the Middle States Association of Colleges and Secondary Schools. The examination by the visiting team was a thorough one, not only probing the qualifications of faculty and the curriculum offerings but the relationship of Gallaudet College to the Federal Government. Again, in 1967 the College underwent a re-accreditation review. Once again, full accreditation was established and little doubt remained that Gallaudet College was, in fact, comparable to other college programs leading to Bachelor's degrees.

A multi-purpose institution

Gallaudet College continued to grow in size and quality as a Liberal Arts College during the 1960's. In 1969 the Board of Directors appointed an out-of-house committee known as the Committee on the Role and Function of Gallaudet College to study the future of the College. The Board requested that the Committee examine the broad sweep of needs of deaf people throughout the nation and to redefine the role of the College in relation to these needs. The Committee was both thorough and bold in its work. It produced a report which it entitled, "A New Era," and recommended to the President and the Board of

Directors that Gallaudet College evolve into a multi-purpose institution. This Committee recognized the importance of the Liberal Arts program and insisted upon its continuation as the major focus of Gallaudet College; however, it recommended that certain aspects of this program become more flexible and more responsive to the needs of deaf students. The report urged the College to offer continuing education opportunities, to provide services to deaf adults, to expand its research, to permit its graduate programs to grow, and to become increasingly an advocate for deaf people throughout the nation. This represented one of the greatest challenges Gallaudet College has ever faced. It meant change, growth, more involvement, and a vastly broadened mission.

Gallaudet College, five years later, finds that it has been responsive to the recommendations of the Committee on Role and Function. The response has not been easy but it has been extremely worthwhile. Gallaudet College is now responsible not only for the Model Secondary School for the Deaf as a national demonstration school but the Kendall School now functions under a new law which requires that it become also a demonstration school of national significance. The Continuing Education Center now serves well over 1,000 persons annually and conducts forums in cities where there is a significant deaf population. Public Service Programs operates conferences focusing on problems of deaf adults and is truly an advocate which helps deaf persons relate to their hearing society and deal with discrimination when it occurs. The research effort of the College emerges through the Sensory Communications Laboratory, the Linguistics Research Laboratory, the Office of Demographic Studies, the Cued Speech Project, the research components of both the KDES and the MSSD, and only recently, Project LIFE. Thus, Gallaudet College has a new profile, a profile which represents both the structure and the programs which are required to serve a broader mission. The mission of Gallaudet College is now very much like the mission of land grant institutions which have been serving hearing people for well over one hundred years.

Preparing for national leadership

The planning efforts of Gallaudet College have recently been formulated in a position paper entitled, "Planning for National Leadership." This paper has been distributed to the faculty and staff and approved in principle by the Board of Directors. It represents a plan for becoming a truly national institution and for making a difference in the education and welfare of deaf people on the national level.

Gallaudet College has a student body which is nationally representative. It has a Gallaudet College Alumni Association which is nationwide in its membership. The Continuing Education Program, the Public Service Programs, the Research Laboratories and Projects are all national and international in their scope. The KDES and the MSSD also have national missions as demonstration programs and as research and demonstration centers. Thus, Gallaudet College has many characteristics which make it a national institution without a doubt. But this is not enough.

Gallaudet College must be recognized for what it does as an advocate for deaf people on the national scene. This is the challenge of the next four or five years for Gallaudet College. Can we work toward giving deaf persons access to many educational programs? Can we assist them in eliminating discrimination of a hearing society against them? Can Gallaudet College support the deaf adult in receiving Equal Employment Opportunities? Can we meet the deaf adult's continuing education needs so that he not only has a richer life but receives promotions much in the manner that hearing people do? Can we bring the needs of deaf people to the hearing public and can we build an understanding of and acceptance of deafness and deaf people which will benefit them for years to come?

This is the new challenge of Gallaudet College, a challenge that is self-imposed and willingly accepted. It is a challenge, however, that will require a much greater outreach and involvement with friends of deaf people, other programs serving deaf people, and a variety of agencies across the nation.

A national and international resource center

And what does the future hold? No one really knows, but we see Gallaudet College becoming increasingly diversified as it responds to a larger variety of needs of deaf people. We see Gallaudet College already serving considerably beyond the confines of Kendall Green. Gallaudet College is now offering extension courses in other cities, forums across the nation, conferences where there is concern with problems and where people are, and the wide range of services. Probably within the next few years Gallaudet College will be providing as many programs and as much service off of Kendall Green as it does on Kendall Green. It will utilize a vast array of new technology in making programs available to people where they are and it will never, we hope, lose the human touch, the complete acceptance of deaf people and their deafness, and a concern with quality.

Gallaudet College does not foresee the future any better than other institutions. Nevertheless, Gallaudet College is planning to become a national and international resource center for deaf people. We know our mission, and we know how to extend it to meet the growing interest and needs of deaf people. This is what Gallaudet College is all about. This is what Gallaudet College will be doing. We are reasonably certain, even confident, that we will be successful for we will be depending in large part on talented, well-educated deaf persons to implement the evolving role of Gallaudet College.

THE ROLE OF THE NATIONAL TECHNICAL INSTITUTE FOR THE DEAF IN EDUCATION OF THE DEAF

Robert Frisina, Ph. D., Director, National Technical Institute for the Deaf, Rochester, N.Y.

Let me begin by saying how pleased I am to be with you who concentrate your efforts on services to deaf children and adults throughout the nation. The delivery of quality services is a great challenge even in the best of times. And yet we find ourselves in a day of competing priorities which will demand the best in all of us.

The National Technical Institute for the Deaf (NTID) can, should, and is beginning to play a significant role in the education of deaf persons. In the time available today, I shall briefly highlight some of the ways through which this is becoming so.

To begin with it can be said that the overarching role of NTID in the education for deaf persons is to advance the socio-economic status of the nation's deaf. The goal is pursued through efforts to educate and to train students, through research, and through the preparation of personnel to work in this specialized field of education.

I shall discuss the role of NTID in the education of deaf persons under the following headings: 1) access, 2) choice, 3) implications for elementary and secondary programs, and 4) improved learning through research.

Access

Access to postsecondary educational programs has been markedly expanded by NTID's presence. Prior to its formation the number of deaf students who gained access to postsecondary colleges other than Gallaudet was virtually zero. Oh yes, there were exceptions, but studies suggested that no more than one in one hundred was expected to satisfy the entrance criteria for the some 2500 community colleges or 4-year institutions of higher education so readily accessible to more than 50% of a graduating class of high school hearing students.

Next fall a scarce seven years later, more than 3,000 deaf students will enroll in a network of community colleges, technical-vocational institutes and four-year college programs; more than 600 will be at NTID. Twenty-five percent of these 600 will be taking fulltime academic loads in the other colleges of Rochester Institute of Technology (RIT) studying side-by-side with hearing students. Another 50 percent NTID students are expected to enroll for one or more courses in the other colleges. This is all the more remarkable when considering that the entrance standings of NTID students is skewed toward the 8th grade achievement level following the secondary school experience. Access to higher education by deaf students is clearly enhanced by NTID's presence.

Choice

Choice of a college setting has been broadened by the existence of NTID; another very important contribution being made in the education of deaf persons. NTID was established in 1965 to extend career choices beyond those then available primarily through secondary programs and Gallaudet College. Qualifications precluded, for the most part, more than a handful of deaf people enrolling in regular colleges and universities in any given year which meant technical education was not available to 99% of any graduating class of high school deaf students. That is no longer the case for at NTID there are programs ranging from certificates, to diplomas, to associate, to baccalaureate, to master's degrees in the following technologies and applied arts:

Business Technologies (certificate, diploma, associate degree)

- Data Processing
- Office Practice and Procedures
- Accounting Technologies

Technical Science; (certificate, diploma, associate degree)

- Histologic Technician
- Physician's Office Technician
- Hematology Technician
- Clinical Chemistry Technician
- Microbiology Technician
- Medical Laboratory Technician
- Medical Record Technician
- Optical Finishing Technology

Engineering Technologies: (certificate, diploma, associate degree)

Architectural Drafting
Industrial Drafting
Electronics
Manufacturing Processes
Numerical Control Programming
Architectural Technology
Civil Technology
Electromechanical Technology

Visual Communications Technologies: (certificate, diploma, associate)

Applied Photography
Printing Technology
Applied Art

Advanced Technologies: (examples of B.S. degrees)

Business Administration
Accounting
Food Administration
Electrical Engineering
Mechanical Engineering
Electrical Technology
Mechanical Technology
Fine and Applied Arts
Art and Design
School for American Craftsmen
Printing Management
Professional Photography
Photographic Arts and Sciences
Photographic Illustration
Computer Science and Technology . . .
and many more.

Graduates of NTID are employed in 32 different states. We have discovered how to match the needs of the employer with those of the employee in a successful way—ninety-six to ninety-eight percent of our graduates are employed. Equally important is the fact that 96 percent are employed in the fields in which they studied and are employed at levels commensurate with their levels of training, i.e., engineers are hired as engineers, draftsmen as draftsmen, printing managers as managers and not as pressmen, etc. Of great significance to the purposes of NTID are the following facts pertaining to these graduates: (1) 86 percent go to business and industry; (2) 10 percent go into government work; (3) 4 percent go to education.

The program enrolls students whose general educational levels at the completion of high school is only 8th grade. In order to compensate for this, great care has been taken to develop successful in technical preparation, general education, personal, social and cultural development and communications improvement.

With the special programming and availability of courses of study available through NTID and the eight other colleges of RIT the program choices for deaf persons is greatly expanded by NTID.

Another important facet to the choice feature of NTID is the opportunity to study in an environment that consists mainly of hearing students. NTID allows students to choose this type of setting if they wish. For many, this provides practice effect for the employment setting which they aspire. In effect the best of both worlds are available for the deaf student to choose from. There is a sufficiently large number of deaf peers and hearing peers to allow choices of friendships and interactions to occur; these develop in a variety of ways which reflect the abilities and preferences of the individual student.

This concept of choice is fundamental to a democratic and pluralistic society that soon will be celebrating its 200th anniversary. In this regard, NTID complements its sister institution Gallaudet and the other efforts offering program and setting choices to deaf students.

Implications for other education programs

Curriculum ties.—NTID holds some promise for assisting elementary, secondary and other postsecondary efforts on behalf of deaf students. The concept of preparation for careers implies linkages. Hearing students have a vast array of educational programs available to them. The network for deaf students, particularly beyond the secondary grades, is just beginning to flourish.

The new career opportunities that exist at NTID must become known to educators, students, and parents. They must become so in order to assure that the curricula at the elementary and particularly at the secondary level reflect preparation for these new fields of study now available at NTID. For example, whereas the art curriculum offered in elementary and secondary programs was limited because the career preparation opportunities in art were limited, we now see career opportunities in this field at NTID. This reality should have some interest to those reviewing existing courses of study. A similar observation could be made regarding the Graphic Arts efforts at the secondary level; a natural bridge to NTID's programs in Visual Communications Technologies. Many more ties between secondary and NTID curicula exist and should be exploited for the benefit of the deaf students all of us are serving.

New goals for students.—The career possibilities at NTID are becoming goals to which young deaf students can now aspire. The new career choices available and referred to earlier in this report should inspire young people, their teachers and their families.

Role models emerging from NTID.—The graduates of NTID are beginning to mount. They are emerging as "living proof" of what can be achieved. The placement records of our graduates and their performances can become an inspiration to all concerned with the development of young deaf children and youth. Deaf engineers, deaf artists, deaf managers in business, deaf accountants, deaf medical technologists, and many many more should one day take a source of encouragement and pride for all to share; particularly the students themselves.

Improved learning through research

NTID is important in the education of deaf persons because of its deep concern for knowing more about learning.

It is encouraging to know that the educational system called NTID can succeed in developing high levels of technical competence in its graduates. Through research in teaching and learning on the part of the entire Institute it strives to bring these levels of technical competence to even a broader band of students. The research accomplished at NTID is aimed at benefitting directly the students who attend NTID; and of equal importance those youngsters served by you at the elementary and secondary levels.

Success in one's work and participation in one's broader community requires problem solving skills and an appreciation of the many goals and cultural features of our society. Much study and research is underway to determine effective ways for deaf students to achieve a better understanding of literature, history, and the humanities so as to increase leadership potential and accomplishments in the broader world.

Research and practice in telecommunications is of special interest to NTID. Students are learning to operate a variety of experimental and commercially available telecommunication devices so as to make them more independent and to enlarge their social circles if they choose to do so.

Research in the personal aspects of communication such as speech, lip-reading, use of hearing aids, manual communication proficiency, reading, writing and acting abilities should be of interest to all educators of deaf children and youth. NTID is dedicated to learning more about these processes and in developing instrumentations and practices that can improve the communication status of all deaf students.

NTID's commitment to bringing technology to education is a clue to its potential usefulness in educating deaf children. The use of television, speech feedback devices, computers and other display units have as their objective enriched and broadened learning on the part of each deaf student.

Efforts go forth in the areas of personal/social growth in what has been referred to as the affective domain. Research is underway that relates to deaf-hearing interaction, experimental educational theatre, developmental education, and experience in the community. Each searching for ways to assure personal and social maturity upon entry to work and community environments and of such quality that their mobility and staypower are at least equal to that of their hearing peers.

A concluding observation regarding NTID's role in the education of the deaf pertains to the whole question of integrated education. The fact of its being imbedded within a regular university structure, and because of its size being of sufficient magnitude to do so, NTID in a thoughtful, programmatic way is fast-becoming a testing ground for the mixing of deaf and hearing learners and teachers in mutually beneficial ways.

Finally, NTID in partnership with the educational programs represented here should provide this nation with deaf citizens prepared to participate in its business, industrial, educational and governmental affairs to the extent each wishes to do so. This is no small task but certainly a goal to which we should all subscribe.

STUDENT SUPPORT SERVICES FOR DEAF STUDENTS AT CALIFORNIA STATE UNIVERSITY AT NORTHRIDGE

Harry Murphy, Ph. D., Assistant Director, Center on Deafness,
California State University, at Northridge

Campus Services for the Deaf is the sub-unit of the Center on Deafness which is responsible for providing support services to deaf students registered at this university. It is a service unit and does not offer courses. All courses are offered through regular academic departments.

The support unit receives its funds from three sources:

1. California State Department of Rehabilitation
2. State University and College System
3. Bureau of Education for the Handicapped

The funding picture reflects the desire of the state of California to adequately provide for its citizens by providing basic instructional and administrative costs (funded by state university and college system) and supplemental support services such as those described herein (provided by California State Department of Rehabilitation). Funding from Bureau of Education for the Handicapped (BEH) reflects the national representation of our students and provides services essentially for non-California residents.

The basic support consists of four services: interpreting, notetaking, counseling, and tutoring. These may be further classified as:

1. Communication Support (Interpreting and Notetaking)
2. Academic Support (Tutoring)
3. Psychological Support (Counseling)

Communication support

The philosophy of Campus Services for the Deaf is to strive to provide deaf students with equal access to information. This is an ideal goal and one that is not fully met due to budget limitations and other considerations, but nonetheless, it is the stated goal of the organization and all resources are marshalled to attempt to meet it.

Interpreting.—We attempt to provide interpreting services—as a first priority—in all academic classes. Over the past three years our coverage has increased considerably primarily because of increased funding. At one time we were able to provide an interpreter only if a class had two or more deaf students. A "one to one" situation (one interpreter serving only one deaf person in a class) was prohibitively expensive. As a result of increased support from our funding "partners," we are now able to cover all academic classes with interpreting services where requested.

We recognize that the college experience consists of a combination of curricular and non-curricular experiences. Consequently, more of of our attention is being given to enriching the college experiences of deaf students by providing interpreters at a growing number of things such as "noon forums," which feature such speakers as Ralph Nader, Senator John Tunney, etc., and also at more extra-curricular events under university sponsorship.

During the spring semester, the staff consisted of a department head, four full-time lead interpreters, and 63 part-time interpreters. We maintain close ties with the Registry of Interpreters of the Deaf (RID) and we strongly encourage our interpreters to achieve RID certification. To that end, frequent in-service training sessions are held, as are special workships sponsored by the National Interpreter Training Consortium (NITC), of which CSUN is a founding member. University courses are offered each semester to train people in sign language and at various levels of interpreting. Additionally, we offer special summer workshops to emphasize particular variables such as reversing, legal interpreting, etc.

Deaf interpreters are used to interpret with several deaf-blind students and deaf instructors and assistants are used throughout all training and in-service sessions with interpreters.

This summer, one workshop of special interest deals with Nonverbal Expression. It is to be taught by a professional mime and will explore the contribution of body language and facial expression to communication.

Notetaking.—We recognize the significance and permanence of the written word as opposed to the passing nature of interpreting. We strive to provide good service in both areas by having interpreters render an accurate translation of a classroom lecture as well as having good notes to refer to at a later time.

Some students prefer a notetaker to an interpreter even though they know and can follow sign language. Oral students request notetaking over interpreting, also.

Our policy at this time is to provide a paid notetaker if no interpreter is requested. When a paid interpreter services a situation, volunteer notetakers are recruited from among class members. As our financial support increases I personally would like to see paid interpreters and notetaking services in each class.

At the present time, our notetaking services are coordinated by a part-time person who reports to the Head of Interpreting Services. This person coordinates this service through 32 part-time persons, most of whom are enrolled in sign language and interpreting classes and who aspire ultimately to be interpreters.

Notetakers receive in-service at periodic intervals to improve the quality of this service.

Academic support

Tutoring.—Tutors are provided upon request. Generally, a request for service in this area will grow out of a counseling session.

Tutors are recruited from a variety of sources including: recommendations from department heads, deaf upper division and graduate students, and interpreters and notetakers.

In a recent study of the effects of tutoring on the grade point average of deaf students, it was found that there was no significant difference between those deaf students who received tutoring and those who did not. We interpret this finding to mean that the deaf student who requests tutoring, and who usually does so because of a low midterm grade or anxiety about a course, achieves by the end of a course at the same level of a deaf student who did not seek tutoring. It would appear that tutoring is a positive factor in the achievement of deaf students.

Psychological support

Counseling.—Counseling is considered a part of a more inclusive service, i.e., Student Personnel Services. The department of student personnel services is staffed by a department head and three student personnel specialists, two of whom are themselves deaf.

Counseling is done with individuals and in groups and falls into three major categories: academic, career, and social/personal. A recent study showed the following breakdown:

	Percent
Academic counseling	37
Career counseling	9
Personal/social counseling	54
Total	100

Group counseling sessions include hearing as well as deaf students and deal with various aspects of personal awareness and personal growth. Counselors deal with an educational process of bringing students to a realistic appraisal of themselves and their role as a deaf person in a large, urban university designed to accommodate a person with normal hearing.

The primary end of counseling is to prepare the student for independent decision-making—in a word, self-determination.

Summary

At California State University, Northridge, 131 deaf students attend regular classes on the campus of a large, urban university with a population of about 25,0 0 students. Campus Services for the Deaf provides support services in these areas: Communication (Interpreting, Notetaking), Academic (Tutoring), and Psychological (Counseling). Recent GPA (grade point achievement) studies show that deaf students achieve at a rate comparable to hearing students. We believe these studies demonstrate that deaf students can achieve at such a rate because of the nature of support services provided.

Our aim is to enrich and expand the model of integrated education and to serve as a key resource to others with an interest in integrated post-secondary education for the hearing-impaired.

STUDENT PERSONNEL SERVICES FOR DEAF STUDENTS AT GALLAUDET COLLEGE

Charles R. Ferrell, Vocational Rehabilitation Liaison, Gallaudet College, Washington, D.C. presenting for Richard Phillips, Ed. D., Dean, Student Affairs, Gallaudet College

Back in the days before the coming of the professional counselor, a college student looked for advice and help from his fellow students, from some of his teachers, and other members of the staff. I can even remember asking the advice of the business manager's secretary on what would be an appropriate Christmas present for my girlfriend. In those days, as is true today, the Gallaudet student had the benefit of association with a large number of peer associates and deaf members of the teaching staff. There is much to be said for adult models who themselves are deaf and have a good understanding of the problems of deafness and the world as seen by a deaf person.

Not too many years ago when freshmen were permitted to select their own faculty advisor, they were asked to rank order a selection of three persons they would like to have as their advisor. The selection each year ran very heavily in favor of deaf instructors. This is not mentioned here as a means of downgrading the contribution of our hearing facutly members and others persons on the staff. It is mentioned to underline the thought that a student needs to have a variety of choice among possible persons with whom to discuss his problems, his goals, and his aspirations. There is no question but that a knowledge of the world in general and its constant change from the perspective of a person with normal hearing is a necessary balance in any school program which serves the deaf.

What does all of this mean in the student's personnel services at Gallaudet? It means that we continually strive to make it possible to put a good deal of balance in our overall program. We are attempting to do this from the residence halls on up. During the immediate past semester, we employed a total of 18 full-time staff members in the residence halls. Of these, two (2) were hearing impaired and alumni of Gallaudet. In addition, we use student assistants from our junior and senior classes. There were 12 of these young people on the payroll for the spring semester. We do not necessarily consider residence hall staff people as trained counselors; but we do see them as a valuable group in Student Affairs. They are the members of our staff who have daily contact with every student who lives in the residence halls. This means they interact with somewhere between 900 and 960 students each day. This contact may be nothing more than a greeting in passing ranging up to a most serious telephone call with parents which, in turn, must be interpreted and explained by the supervisor and some degree of counseling takes place.

It might be well at this point to give an overview of Student Affairs at Gallaudet. The present subunits of Student Affairs consist of the Student Health Service, the Student Union, the Residence Hall Program, Financial Aids and Vocational Rehabilitation Liaison, the Counseling and Placement Center, and the Central Office, which coordinates the overall effort.

The Student Health Service is available to every registered student and provides around-the-clock infirmary service. There is a full-time physician who is on call at all times, and a total of eight (8) nurses. One of the major objectives of the Health Service is not that of just providing on-campus health service and care but information leading toward a better understanding on the part of the student of his own health and his eventual doctor/patient relationship.

As is true in all post-secondary programs for the deaf, the support and cooperation of vocational rehabilitation counselors is vital. In order to facilitate the planning, support, and future goals of over 1,000 students each year, it is necessary to provide a very close liaison service. This cooperative effort is certainly a very intensive counseling contact in that the on-campus person needs to carry out many of the responsibilities of the rehabilitation counselor who has only limited contact with his client because of time and distance. One of the main objectives is not so much getting the financial help a student may need, but helping him to realize his own responsibilities in this area. Added to the overall rehabilitation program is financial assistance from Basic Opportunity Grants, Higher Education Loans, and other sources, all of which is put together by the Financial Aids Officer. As is in the case of rehabilitation contact, much emphasis is put upon the individual responsibilities of the student and his family. This is looked upon as one aspect of student growth.

The Student Union, which at this time contains the cafeteria, post office, bookstore, and the chaplains' office, as well as a number of student organization offices, is actually the focal point of the students' daily lives as this pertains to meals and letters from home. The opportunities for evening recreation using the bowling alleys and Rathskeller, as well as closed-circuit television programs keeps a good part of the Union in constant use. To supplement this, the Union staff has provided additional programs in leadership and community contact involving Christmas parties for multi-handicapped young deaf children. Within the next year or two, the cafeteria will move to new facilities and will leave a great amount of space for increased Union activities. The Union staff and its advisory committees are planning towards programs and facility use to supplement many of our planned student development activities.

The Counseling and Placement Center serves as the focal point on campus for individual and group counseling. Utilization of this service by students stems from many sources including referrals from instructors and residence halls personnel, as well as the walk-in student who sees the Center as a source of assistance for many of his problems. The current trend toward career counseling and self-development also has a base in the Counseling and Placement groups. The Placement Office staff, consisting of three full-time counselors and two interns, provides basic assistance towards career placement and summer and part-time employment. The motivation that comes from wanting to use this type of service brings a large number of students to the Placement Office during the year. Student contact time there is approximately one per hour for each of the counseling staff members. This comes on top of efforts such as meetings and conferences to make the deaf worker better known and understood by the large number of personnel people in the Washington area. Placement efforts, to some extent, have been centered around the large number of Federal offices in the District. This has made it possible not only to secure positions but to help the Federal establishment become better aware of the potential of deaf workers and professionals. In the counseling area itself, we find that the type of problems covers the range expected of normal young people in addition to those that may arise from deafness itself. To supplement the service of three full-time staff and two interns, a part-time clinical psychologist is available for individual therapy, group therapy, and staff consultation. The Center also has responsibility for assisting foreign students, of whom we have about 110, 75 of these from Canada.

The largest component of the Student Life subunit is the residence halls. In addition, there are the areas of student organizations, regulations and discipline, and student development programs. These programs have ranged from such things as weight watching to the question or mixed deaf/hearing marriages; from human sexuality to how to prepare for camping trips, and the latter included a number of students who took part in an "Operation Discovery" adventure in the mountains.

The residences also provide areas for quiet study, use of media, and recreational activities. All of these are in addition to the personal growth that comes from group living, contact with staff members who are all experienced in residence hall work or in residence hall living.

In addition to the formalized aspect of student affairs in counseling and residence hall living, there is the area of faculty advisor work with students in their academic planning. Such contacts vary in their nature but have the potential for career advisement from department chairpersons, personal growth and advice on elective courses and a better understanding of the value of a college education. The area of contact with faculty members who are advising students is an undertaking which Student Affairs as a whole hopes to increase as time goes by.

A further student personnel service on campus, which is not directly administered by Student Affairs, is the Student Special Services program. Administratively, this unit reports to the Dean of the College who has designated it as a unit under the Department of Counseling. Special Services is basically charged with focusing on the needs of minority groups and this has been the main goal of the program. However, over the past year, added emphasis has been given to the problems of the multiple handicapped deaf student. This program has included the use of counseling interns, the use of student peer helpers, and frequent group discussions on the overall implications of having another handicap in addition to deafness. At the present time, our multiple handicapped group ranges from the person with a slight motor coordination to the problems of the wheelchair-bound student and the student suffering from a severe case of Ushers Syndrome. The overall impact of this program is only beginning to be felt, but there is no question that its responsibilities and the needs will continue from year to year.

The overall concept of student personnel services at Gallaudet has followed pretty much the traditional pattern, but in keeping with its master plan objectives is moving towards a more student centered program, towards a greater concentration on student development modes and sort of "keeping-up-with the changes of today." All of this is planned to keep in step with similar changes within the academic focus of the College, feeling that Student Affairs will always be supplemental to the academic program, supportative of it, and, hopefully, as time goes on, become an increasingly essential part of a liberal arts program which provides opportunities for each student to grow within his own needs, his own abilities, and towards his own contribution to society.

ADULT EDUCATION FOR DEAF PEOPLE: ICING ON THE CAKE?

Leon LeBuffe, Ph. D., Associate Dean, Center for Continuing Education, Gallaudet College, Washington, D.C.

In 1932, the population of the United States was about 100,000,000 people. In that same year, slightly over 3,000,000 Americans participated in some form of adult education. In 1932, too, Walter John Krug, then a young master's degree candidate at Gallaudet College, wrote a paper entitled "Adult Education for the Deaf—A Long Neglected Need" [1] Mr. Krug (who went on to become a teaching jack-of-all trades at Gallaudet College and the Dean of Men) proposed that deaf alumni meetings and social club conventions become Chautauqua type learning experiences. He noted that correspondence courses for deaf people could be established, that high school equivalency type programs could be established at schools for the deaf in large cities. Krug called on the superintendent of schools for the deaf and for Gallaudet College to take the lead. He noted, too, that Gallaudet College sorely lacked a summer session which would permit its graduates to keep pace with changing developments, especially in the field of education.

---

[1] Krug, Walter John, "Adult Education for the Deaf—A Long Neglected Need", Unpublished M. A. Thesis, Gallaudet College, 1932.

Krug's call for action went largely unanswered, as a similar proposal by Warren Wilkerson, Superintendent of the California School for the Deaf, had been neglected after its issue in 1904.[2] Here and there during the period 1932—to only yesterday—there were sporadic and relatively short lived attempts to include the deaf in the American adult education scene: Kansas City had an imaginative W.P.A. funded adult education program for the deaf during the depression; Massachusetts had a fairly large vocational retraining program during World War II to ease the entry of the deaf into the war industries; [3] various schools and school systems had courses and programs, none sustained for more than a few semesters to the best of my knowledge, during the 1950's and 1960's.

Today the population of the United States is well over 200,000,000. Last year over 25,000,000 Americans enrolled in an adult education course. As a nation, we have progressed from having one in twenty adults participating in the formal life-long-learning process forty years ago, to having one in six participating annually now. Yet, until very recently it was still credible to speak of "Adult Education for the Deaf—A Long Neglected Need."

In 1970, what Krug had concluded in 1932 remained largely true: in adult education, "No organized efforts, systematically carried out, have tried to reach the deaf adult." [4] I am happy to report that Krug's gloomy conclusion is no longer true. We have, I believe, reason to hope that the exclusion of the deaf from adult education will be a thing of the past all over the nation by 1980.

There are large and permanent adult education programs for deaf people in San Diego, New York City, various towns and cities in North Carolina, and in Washington, D.C. More important, though, are the new young programs just beginning or about to begin in each of these states or cities: Atlanta; Newark; Delaware; The San Francisco Bay area; St. Louis; Florida; South Carolina; Richmond; Baltimore; Tulsa; and Denver. Philadelphia, Providence, Pittsburgh, and Chicago have had some programs in the recent past, and are searching for ways to institutionalize and make permanent adult education for the hearing impaired. Efforts are underway in Iowa; Milwaukee; White Plains, New York; New Orleans; Minneapolis; Kansas City, and, I am sure, other cities, to find ways to include deaf people in adult education.

The information received by us at the Center for Continuing Education at Gallaudet College, and our own experience, indicate that there are several important features common to all of the successful programs underway at the present time. The successful adult education program for deaf people, I believe, must have a single coordinator who is free to devote at least half of his or her time to adult education. Classroom teachers are marvelous resources to tap for adult education, but a teacher, or committee of teachers cannot run an adult education program in a large or medium sized city. There is simply too much work and time demanded; a teacher cannot run adult education as he or she might direct the drama club or be year-book advisor.

---

[2] "American Annals of the Deaf," vol. 50, 1905, p. 315.

[3] Muro, Catherine Poshusta, "Adult Education for the Deaf", Gallaudet College unpublished M. A. Thesis, 1943, passim.

[4] Krug, Op. cit., p. 28.

While a single director is needed for an adult education program, tons of money is not necessary. Every city in America already has 80 percent or more of what is needed for a successful adult education program for the deaf. Every city of 100,000 or more already has one hundred or more courses and programs for adults. To use the city I know best as an example, Washington, D.C., has over 2,600 courses for adults who were not pursuing a degree last school year. These courses were offered by community colleges, school systems, private colleges and universities, government agencies, the Red Cross, the YMCA, private businesses and other agencies, many of which one would not ordinarily associate with education. Sears has courses, as do Montgomery Ward, Singer Sewing Machines, and, in Washington, a little garden store called The Potted Plant. In the overwhelming majority of cases, all that is needed for deaf people to participate is a sign language interpreter. In nine cases out of ten, people are happy or more than happy to have an interpreter and deaf students in their classes.

"But are the deaf happy to go to these courses?", you might well ask. Or again, as Walter Krug put it in 1932, "How many deaf people will avail themselves of the opportunity for adult education . . .?"[5] Do the deaf want to go to community colleges and public schools for adult education? The answer is, yes, when the deaf adult learns what is available and what it might do for him or her, he will participate, profit and participate again. When the Gallaudet Center for Continuing Education opened its doors three years ago, a survey of the deaf community in Washington was undertaken. Two-thirds of the respondents indicated that they would prefer courses "for the deaf alone" to courses that were integrated (or "mainstreamed" to use the current jargon). At the end of the first semester, participants in adult education were asked the same question. After the experience of integrated education, over 80% of the deaf adults said that they preferred integration with an interpreter, or did not care one way or the other. So, deaf people will enroll in integrated courses, and they will continue to participate in adult education semester after semester. Enrollment in adult education by the deaf has grown each semester in the last three years in the Washington area. During school year 1974–75, over 1600 enrollments were recorded at the Gallaudet Center for Continuing Education—1600 enrollments from a deaf adult population of about 3,000.

Of course, no one is against adult education for the deaf. There has not been as much progress as there should have been in adult education, however, because I think, people in the field have seen adult education as an unaffordable luxury. Professionals have been preoccupied with children, oralism versus manualism, language development and reading. I, for one, can understand how members of the CAID and readers of the "*Annals of the Deaf*" would not find the time or psychic energy to concern themselves with adult education. After all isn't low cost, no credit adult education really just the "icing on the cake"? The answer, I believe, is "yes, in many ways adult education is icing on the cake, although in other ways it is terribly important."

---

[5] Krug, IBID, p. 42.

To even begin to admit that adult education is in some ways "icing" is considered a great "no-no" by many people in the field of continuing education. It is the fashion at adult education conferences to have a speaker spend an hour explaining how the world might come to an end if we didn't enroll thousands of people in auto mechanics, belly dancing or a family communication course. Typically, such a speaker will tell his audience how fast the world is changing and how incredibly quickly information (which the speaker usually confuses with both data and understanding about the world) is being accumulated . . . thus, necessitating everyone's going to various classes constantly. I have been told that my world is so fast moving and confusing that my great-great grandfather (who fought in the civil war) or my great-great-great grandfather (who lived through the French Revolution and Napoleon) would both be astonished. The speakers I have in mind need an adult education course in history. I really do not understand why those professionals in the field of continuing education don't simply admit: "Yes, adult education is simply intended to make the student happier, smarter, more aware, and/or more content." If that is not a good justification for any kind of education, something is wrong.

There are a few other points I would like to make about adult education for the deaf as "icing on the cake". One is that people in positoins of power in the field of deafness tend to be the kind of people who do not often attend adult education activities themselves; that is, they tend to be well educated, upper middle class white males . . . people like myself. People like me usually are able-just barely-to figure their income tax for themselves . . . I don't need a twelve hour course to avoid H. & R. Block every April. People like me also tend to be too busy. People in a position of power in the field of deafness will often have to put themselves in the shoes of others before they will become interested in adult education for the deaf. A second point to be made is that, while I freely admit that adult education is often a relative luxury, it is a cheap luxury. The total interpreting bill for the Center for Continuing Education's Demonstration Program in Adult Education last school year was about $8,000. This is not much money when you consider that that sum permitted 1,600 people to spend more than 15,000 hours learning. A third point is that the luxury of adult education has important side effects. Through the medium of adult education, deaf people can meet hearing people as equals . . . as fellow learners. Many thousands of hearing Washingtonians for the first time in their lives have met deaf people in an adult education class. Large numbers of hearing people have learned sign language due to an interest first acquired by meeting the deaf in adult education. Businesses in Washington have installed TTY's. Hospitals and other social service agencies have requested courses on deafness and communicating with the deaf because of contacts first made through adult education.

In some ways, then, adult education for the deaf can properly be seen as an affordable and most useful luxury; in other ways, however, what is called adult education is so important that it is shameful that deaf people have not had access to adult education until very recently. To take one large example:—Adult Basic Education. Every county in the United States receives A.B.E. money from the Federal Government under the "Right to Read" act. A.B.E. is this nation's major weapon against illiteracy. Who can deny, too, that many deaf adults need to learn to read, write, and compute figures? Who can deny, too, that many of the students and and potential students in Adult Basic Education need more than the three "R's". Often, these students, and those who should be A.B.E. students in cities without an A.B.E. program for the deaf, are "lost souls" who had very few years of formal schooling, or people with overwhelming personal problems who need counseling and, often, a job before they can settle down enough to learn. Adult Basic Education, is, in my opinion, the single most important part of continuing education for the deaf. My colleague, Linda Donnels, will explain developments in A.B.E. for the deaf much more fully later on today.

Another important area is driver education. A deaf person who does not drive has an additional vocation and social handicap. If a city has an adult education program for the deaf, that program can obtain a free driver education automobile from an automobile dealer through Detroit's nation-wide driver education program. Large dealerships usually have 5 to 10 cars allotted to them to lend free of charge to schools for the purpose of driver education. This is an example of a kind of course (TTY repair being another) that can fruitfully be offered by a Center for Continuing Education for the deaf alone. A deaf person from the community can be hired with the understanding that he or she will become a certified teacher of driving. Deaf people can then learn to drive much more easily and cheaply than if they had to depend on private or even public instructional institutions.

Job training is a third serious area within the larger framework of adult education. We all know that schools for the deaf and vocational rehabilitation agencies offer job training. Often, however, these institutions concern themselves only with initial training and placement. The deaf worker has little opportunity to take on-the-job training which is often encouraged or even required for advancement. I suspect that this is a major contributing factor to the underemployment that all agree is endemic among the deaf population in the U.S. There has been an important new development in this area: the U.S. Civil Service Commission's Bureau of Training has agreed to provide and pay for an interpreter in any course for which five or more deaf people register. The Bureau of Training offers hundreds of different courses annually in every major city in the United States. These courses range from basic to the advanced, and they are open to employees of the Federal Government and any state or local government. The courses are free to the employee if he is sponsored by his agency (the agency then pays the Bureau of Training a fee for the student.) There is such a demand for these courses that there have been four courses offered for the deaf alone in Washington during the past year, with over 100 deaf students participating. In addition, another 100 or so deaf workers responded to a questionnaire sent out by the Gallaudet Center for Continuing Education by saying yes, they would like a course or courses, and, yes, they did think they needed training to help them advance on the job. If you consider the numbers of deaf people in the employ of all the various governments across the land, you will probably agree with me that what we see in Washington is the tip of an iceberg. I suspect that large industries in various locations might also respond positively to a request that they provide interpreters for their deaf employees. Every large business in the U.S. must now show the steps it is taking to hire and advance the handicapped. This requirement is new and it is quite possible that there are businesses and industries which would welcome an adult educator who knew how the business might hire and/or advance their deaf workers.

The agreement by the Bureau of Training to pay for interpreters might be an important precedent: it is an example of a public agency using public funds to pay for interpreting services. San Diego's Beverly McGee at the San Diego Community College's Center for the Handicapped was instrumental in another first—I think it is a first—the hiring of a full time interpreter for the county and all of its agencies. Adult Educators can be instrumental in convincing public agencies that they have a duty to pay for interpreters, just as they have a duty to make public buildings accessible to the orthopedically handicapped. Although school people are often locked into budgets and unable to change budgets quickly, I have yet to have anyone deny that the need is a valid one. It is simply justice that public agencies pay for interpreters. As Walter Krug put it in 1932 "tax money should be used for adult education of the deaf because deaf adults pay taxes, too."[6]

Finally, I wish to remark that many communities need an ombudsman for the deaf community, a bridge between the deaf community and the hearing world. An adult education center can be such a bridge. A person charged with the responsibility for adult education for the hearing impaired in a medium sized or large town will soon find himself being contacted by a wide variety of agencies and individuals. The person in charge of the program will undoubtedly see a need to establish sign language courses, if such courses are not already available. He or she will also get calls which can lead to courses and programs on deafness at various agencies and social welfare organizations. The adult educator will also see opportunities somewhat beyond the normal range of activities included in the term adult education. For example, last month 75 deaf high school students and ten of their teachers from ten different schools for the deaf were able to participate in a marvelous program called "Close Up" because the Center for Continuing Education was able to locate funding for interpreters. The 75 deaf students and 100 hearing counterparts spent an enjoyable and educational week in Washington studying the government. Each student met his or her congressman, saw senate hearing, met the press, and took part in a series of tours, seminars and discussions. The evaluations of the program were overwhelmingly positive, and both deaf and hearing students lauded the integration of the hearing and the non-hearing during Close Up week. The staff of the Close Up organization is now searching for funds for interpreters so that many more deaf students can participate in this worthwhile program. Next school year, every high school for the deaf in the United States will be invited to participate in Close Up, and each school will be offered two full scholarships.

Adult education for the deaf has, in many places, acquired quite a momentum in the last few years. It is my earnest hope that this momentum can be maintained, accelerated and channeled into a larger and larger variety of areas. With the continued interest and support of schools and programs for the deaf, I am confident that more and more deaf adults can participate in adult education, and through that participation become at least a little bit smarter, more content, thriftier and happier.

---

[6] Krug, IBID, p. 35.

ADULT BASIC EDUCATION PROGRAM FOR DEAF PEOPLE

Linda Donnels, Assistant Program Coordinator, Center for Continuing Education, Gallaudet College, Washington, D.C.

During the affluent 1960's there were millions of Americans who were not enjoying the prosperity of the times. Having less than a high school education was and is a substantial impairment of one's ability to get or retain employment, no matter what the economic status of the nation may be. In 1966, Congress took a giant step toward helping the undereducated in our country by passing the Adult Education Act, which made provision for the establishment of free Adult Basic Education programs nationwide. The target population was adults, 16 years old or older, who were not enrolled in a full-time public school program and who were achieving at or below the eighth grade level. It was hoped that ABE programs would give these adults the chance they needed to become more productive, happier members of society and lessen the chance of their dependency of others.

Adult Basic Education was a crucial component in the outreach of adult education programming. Yet where were the deaf people in these programs? There were always deaf people in the eligible target group. According to the 1970 National Census of the Deaf Population, "more than half of the adult deaf population has not completed high school and 28 percent have only an eighth-grade education or less." Noting achievement test performance, "the average deaf student [seems to be] several years behind his normal-hearing peers." (Schein and Delk, 1974). Considering achievement, perhaps more than 28 percent of the adult deaf population are potential ABE students, yet until now very few were being served by ABE programs.

It was not until 1972 when Gallaudet College started its Center for Continuing Education that publicly supported ABE classes began to serve deaf adults in the greater Washington area. One thrust of the Demonstration Program in the Center was to open for deaf citizens educational services and facilities that had for years been available to the hearing community. The reaction of educators to setting up ABE classes for the deaf was favorable, and as one adult educator stated, "If we would have known that there were deaf people in the community who wanted this ABE class, we would have started one long ago. We just didn't know!"

Creating awareness, a current goal in the field of deafness, is also a goal of necessity in the area of Adult Basic Education. In the first nationwide study of ABE programs it was noted that "there is little evidence that ABE programs are established or students recruited in such a way as to seek out hard-to-reach adults most in need of training." (*Education Daily*, 1974) In many communities school systems are indeed out-of-touch with their deaf taxpayers who may have attended a school for the deaf in another city and, unfortunately, deaf citizens have been left out of the mainstream of community activities because of communication difficulties.

In Washington, the largest percentage of our ABE student body was referred to the program by Vocational Rehabilitation counselors, while some potential ABE students responded to our advertising in adult education brochures, the TTY news service and county school system flyers. Those people were easy to find. But the word is spreading and the hard-to-reach deaf adults who may have been isolated in the hearing community are starting to show up, as more and more agencies not directly connected to deafness learn that we exist.

The Adult Basic Education program at Gallaudet has grown from its two classes which began in 1972 to a seven-location program in Washington, D.C., Maryland and Virginia during the 1974–75 school year. The classes are cooperative ventures with school systems or agencies and, in most cases, the major financial support for the classes comes from the school systems themselves rather than from Gallaudet. All but one of the classes is for deaf adults only, so that the course curriculum can be specifically designed to meet the needs and goals of deaf adults, particularly in English instruction.

The Center for Continuing Education did initially provide interpreters for experienced ABE teachers in the schools. Later we discovered that students flocked to classes taught by deaf instructors or teachers skilled in sign language. With orientation and supervision from the Center, deaf and signing teachers made their debut on the ABE scene. The schools hired these teachers outright eliminating the extra expense of interpreters.

In the summer of 1974 a liaison position, Adult Basic Education Specialist, was added to the Center's staff to supervise ABE classes, handle recruitment, provide teacher training and set up a workable model ABE program in cooperation with other schools and agencies.

Our Adult Basic Education program this year had about seventy enrollments per semester with a core of about fifty regularly attending students. The average age of the students was 27.2 years with a range between 16 and 48 years. The group had slightly more females than males. Most ABE students were employed except those attending our daytime program; however, many students expressed dissatisfaction with their jobs or wanted to change or advance on the job. They felt that improving their academic skills especially written English was essential to their future success.

Reasons students gave for attending an ABE class in fall, 1974 were as follows:

64 percent to improve my English.
50 percent to learn to read better.
44 percent to learn more Math.
36 percent to improve my writing.
33 percent to improve myself by learning.
33 percent to improve myself by learning.
17 percent to prepare for the Gallaudet entrance exam.
14 percent other.

ABE registration is kept open during the semester to encourage spontaneous and immediate enrollment. Frequently students have entered classes after the first session and class format is flexible enough to permit this. Within each classroom students work toward individual goals. One student may be learning about checking accounts while another is trying to master the use of articles in his written English.

The teacher doesn't always work alone. Classroom aides have enabled the teacher to supervise many different activities at the same time. Gallaudet undergraduates have been a valuable source of assistance as have community volunteers and parents of deaf children.

The ABE teacher is often called upon to provide more than just instruction. Frequently, ABE students have pressing needs that go beyond reading, writing and arithmetic. The problems students have coping with everyday life may severely infringe on their ability to benefit from instruction and may cause them to drop out of any educational program. In the fall of 1974, the first ABE counselor for deaf adults began working with the night classes in two schools in Maryland. She helped the students in those two schools with a wide variety of problems, freed the teachers to teach, and in several cases prevented students from dropping out of the program because of personal problems. This service will be expanded to all of our ABE classes in the fall of 1975.

One project on the drawing board for the future is the establishment of an on-the-job training program here at Gallaudet College for unemployed ABE students. We believe that many jobs available on campus, particularly in the area of grounds work and maintenance, could be filled by educationally deprived deaf people, if ABE classes and counseling are provided during training. Funding sources are being investigated and we hope to make the program a reality during the 1975–76 school year.

Another project at the Center for Continuing Education is the development of ABE materials for deaf students. In exploring the various materials written for adults, we found that there still seem to be some gaps. Appropriate materials are not available in low-level, practical English language instruction, for example. The Toe-Hold Literacy Packet, authored by Virginia McKinney, was the first effort by the Center in the language arts area. A more advanced series on English language instruction is currently being prepared by our office of Curriculum and Research under the direction of Dr. Elaine Costello. The first of a series of videotapes to be used in life coping skills instruction are being produced this summer. These tapes will focus on problems deaf adults face at work, home and in the community.

As a part of the Demonstration Program, our Adult Basic Education program hopes to be a model to the nation of what can be done and a proving ground for ABE innovations. We have tapped resources such as those developed through Project DAWN (Deaf Adults With Need) which laid a lot of groundwork in the early 1970's for ABE programs for deaf adults. We have been extending our resources around the country in the form of on-site ABE teacher workshops and consultations in cities such as Chicago, Denver and New York. Hopefully, in the future more and more communities will be responsive to the needs and problems of deaf adults. When classes for deaf adults are an integral part of adult basic education programs, then perhaps all deaf people will be able to enjoy the full benefits of community life and realize their personal goals.

REFERENCES

Education Daily, March 29, 1974, p. 6.

McKinney, Virginia. *Toe-Hold Literacy Packet*. Los Angeles: Photo-School Films, Inc., 1973, 1974.

Schein, J. D. and M. T. Delk, Jr. *The Deaf Population of the United States*. Silver Spring, Maryland: National Association of the Deaf, 1974.

THE DEAF CITIZEN AND HIS RESPONSIBILITY TO THE DEAF COMMUNITY

Thomas Posedly, Architect, Tucson, Ariz.

Ladies, gentlemen, and the members of American Instructors of the Deaf, I greatly appreciate this opportunity to share with you my little gem of philosophy.

A hearing teenage girl was excited with her school project. She wanted to write a research paper on deaf people. She planned to go to the school for the deaf where she could meet deaf people her age, participate in their activities, make friends, learn about the deaf world, and exchange concepts of life in general. She called the school and asked if she could visit. The school replied, "No, we have the rules that anyone under eighteen years old can't visit with the deaf students on campus, and the deaf students can't go off campus without supervision."

Social Sciences teacher to a deaf student: "Since you are eighteen years old, would you like to be a registered voter? We can go to the registrar now if you want."

STUDENT. "What for?"

TEACHER. "So you can be a good citizen because as a voter you can help lots of people."

STUDENT. "Why should I? I am deaf. I don't want to bother with the hearing world."

At a TTY Club meeting there was a high tension of a possible fight over the idea that some TTY's should be made available to hearing friends, families, and individuals who became deaf due to age. On one side many deaf members said that the deaf should have the first choice and let others wait. On other side few deaf members and some hearing staff members from a special services agency for the deaf retorted that TTY's should be available to all those who need it. The meeting adjourned with many bad feelings.

After sending out three hundred notices and advertising on the TV news for the deaf about the important meeting on a Saturday, the advisory council officers expected an attendance of one hundred. Only ten showed up. One deaf member at the meeting made the understatement of the day: "Deaf people don't like elections."

It is my intention to talk to you about the isolationism which can lead to the polarization of the deaf community and the lack of individuality among the deaf adults and students. In other words, I want to talk about the walls built by school regulations and deaf society which leads to conforming isolated lives of deaf people. I think that isolation is a greater handicap for a citizen than deafness. I want to share with you the ways you can help deaf students in their development as better citizens in the future, and the ways a deaf adult can improve himself as a citizen. I don't guarantee that these will be 100 percent successful. But, the balance of life can be helped by increasing the number of responsible and active citizens from present 10 percent average of deaf population per city to 50 percent or more.

Isolationism of certain school regulations can hinder the integration and exposure of deaf and hearing students in such ways they are not free to visit one another on or off campus, to make friends, or to visit places of interest alone anytime they can. Without these opportunities, the deaf and the hearing won't become deeply aware with each other. Isolation in the school for the deaf can lead to polarization of the deaf community as a sheltered group of deaf people, mostly graduates from those schools, because they don't know any better. The resulting general distrust of hearing people, absence of responsibility, and shortage of living skills among the deaf is so prevalent that we may need "Half-way Houses" in communities to help the recent school graduates adjust to the new world of employment, household economics, food nutrition, rents, emergencies and all aspects of everyday living of which many hearing students and some deaf day pupils are more aware than residential students. Because they were not isolated.

Overprotective school regulations exist because students are not trusted. They will never learn about responsibility this way. Despite the strictest rules, there are some pregnancies. Why? The students don't know what responsibility means with so much distrust around them. Surely the schools can learn to trust their students. The schools can learn to give them appropriate responsibility for themselves and their actions. My first suggestion is to have constructive responsibility regulations if you must have regulations. They can include the fourteen to eighteen year old students, or high school students. My second suggestion is to increase field trips to city council meetings, club meetings, and any civic or political meetings which will help reinforce the student's understanding of responsibility and community involvement through increased exposure. If some schools have already removed the isolationism, I want to congratulate them because we can't afford that "wall". Half-way Houses, deaf awareness programs for the hearing population, community services for the deaf, and many other programs needed to counter-attack that wall are expensive.

Isolationism is not all the schools' fault. Our deaf society has its share of the blame for isolating themselves with their own set of values and role-playing, called "deafism" for the purpose of this speech. This can create lack of individuality among many deaf adults and students. Remember the quotations from previous stories: "I am deaf. I don't want to bother with the hearing world," and "The deaf people don't like elections." This attitude of isolation and conformity can come from the deaf themselves, not only from a bad experience with overprotective parents, schools or teachers. It is very difficult for a weak deaf person to avoid developing this deafism in a cultural environment that encourage this such as deaf olympics, deaf clubs, deaf insurance, deaf church, and deaf everything that has little or no hearing person participation. In many cities a deaf community is wrongly assumed to be a group of deaf people mostly from schools for the deaf. Remember the story about the TTY club a while ago. The deaf felt that hearing people aren't included in their circles. Many find it hard to accept the hearing spouses of the deaf. In the same boat are some hearing persons. Let me tell you of an incident from a few years ago at another convention. A presumably well-tenured hearing teacher of the deaf asked my hearing wife what she was doing there. My wife replied that I was her husband. "Oh," sniffed the teacher, "so he is trying to be hearing. Well, someday he will outgrow it."

The deaf community is really more than a group of deaf people. It is a group of individuals bound by various factors. We should include the hearing friends, families, rehabilitation workers, interpreters, and teachers of the deaf and individuals who lost hearing or voice because of disease or accident, along with the deaf and the hard of hearing. All of these are part of the "deaf community" even though some of them may not know sign language as their first language. What binds them? Knowledge of sign language, deafness, hard of hearing-ness, their involvement in education, rehabilitation, special services, friendship, and family relations with the deaf, and finally common cultural interests bind all these people. I have two examples. The first one is an advisory council for the deaf in Tucson, comprised of three organizations of the deaf, two organizations for the deaf with hearing officers, one hard of hearing organization, two educational associations, and three service agencies. This is what I call a deaf community. They have a common goal, involving general progress for the deaf. Another example is the National Theatre of the Deaf. There are hearing directors, interpreters, actors, and backstage technicians, as well as deaf actors, etc. Why is it called " . . . of the deaf"? Perhaps the name should be changed to "National Theatre of Sign-Mime" because of that communication media used in this theatrical company.

But I digress. The whole point is that the deaf are no different from the hearing. We are all responsible individuals, although some are less responsible than others. All of us, including deaf people, should know that a deaf person is: (1) An individual human being; (2) An educated American citizen; and (3) A person with a hearing problem or communication handicap.

No two persons, deaf or not, are alike. All individuals are created equal, although some individuals need special things in order to be equal with others. Some need eyeglasses to see as well as others. Some need interpreters to get the same information that others do. Some need TTY's with regular phones. Some need seeing eye dogs. Some need wheelchairs. Some need artificial limbs.

All deaf people are more or less educated American citizens but the responsibility is not a natural instinct. It must be taught. All of us have to be taught that responsibility is the small price we pay for freedom. A deaf person will go to meetings or do something because he feels the responsibility to improve his community which will bring benefits to himself as well as others, in the way of better services, better recreational facilities, better health, better education, better employment and, best of all, a better world for all of use to live in. A deaf person will go to the voting polls because he feels the responsibility to maintain his freedom, his constitutional rights, the right direction his country should go and the best public servants. By the way, you come to this convention because you feel the responsibility for improving your teaching skills.

Finally, deaf persons are really persons with hearing problems or communication handicaps. Once the communication handicap is overcome by the use of pad and pencil, sign language, or what have you, there is absolutely no reason why a deaf person can't play guitar, join professional sports, participate in regular olympics, join regular civic clubs, or do anything he wants. An individual can do anything. The only limitation is himself.

In conclusion, too many deaf persons live in isolation. To remedy this, all of us have a responsibility to see to it that the walls of isolation, built by the non-responsibility regulations of schools and the deafism in our socity, are torn down. Only through his self-realization as a responsible individual, can the deaf person become a better citizen of his community, city, state and country. So, I ask you as teachers and all deaf people as deaf persons to remember that a deaf person can be a responsible individual, that the deaf community can include the hearing, and that the responsibility is not a heavy chain, but the state of being trustworthy and dependable.

I am sure you will like the results as I did one day when I worked in an architectural firm as a freelance rendering consultant. My client is a good friend of mine for five years or so. Later he told me what happened that day. While I was intent on my work, he walked into my room, talking to me behind my back as if he was talking to a hearing person: "Hey, Tom, what do you think if we do this . . ." Then the laughter from other employees stopped him.

"Oh, that's right. I forgot he can't hear me," realized he. Oh boy, I like that. I am a responsible individual, too.

DEVELOPING A COMMUNITY SERVICES PROGRAM FOR THE DEAF

Claire Cooper, Community Outreach Program for the Deaf,
Tucson, Ariz.

The Community Outreach Program for the Deaf in Tucson opened its doors as a community agency in May 1973. Community services however, may be traced to the first organization of the deaf in Tucson in 1947. Craven (1962) tells the story of a number of Tucson boys who wanted to play basketball in the Farwest Athletic Association of the Deaf tournament. These boys first had to be backed by a bonafide club. No such club existed in Tucson before this time. Over the years this club for the deaf had its ups and downs until seven independent groups combined forces. Following a workshop on Community Development in Ft. Monroe, Virginia (1961), the membership increased and the Tucson Association of the Deaf became the second largest organization for the deaf in Arizona.

Since many people ask how the Community Outreach Program for the Deaf (COPD) began, this paper will outline some of the developments that established and maintained a community services program in Tucson. It should be noted that Tucson is one of the smaller communities with a counseling and referral center in a county population of 371,667. The known deaf number about 400 persons with an expected deaf population of 800 persons. The service program, with little or no budget and an all-volunteer staff is believed to have survived because of 1) the need for special social services for deaf and hearing impaired persons; 2) the ability of deaf persons to rely on the program as a whole rather than the expertise of a single individual; and 3) the assistance of catalyst agencies concerned with helping the deaf to help themselves.

In 1966, an umbrella agency known as the Greater Tucson Advisory Council for the Deaf (GTACD) was formed by representatives from organizations serving or working with the local deaf community. The member organizations—Tucson Association of the Deaf; Registry of Interpreters of the Deaf; Parents, Teachers and Friends of the Deaf; Gallaudet College Alumni Association; Division of Vocational Rehabilitation; University of Arizona; and members of the community at large—were later joined by the Fraternal Society of the Deaf; Catholic Social Services; the State School for the Deaf; and the Tucson Hearing Society. The primary objective of the eleven independent groups was to establish a social service center for the deaf members of the community, but they did not know how to raise the money. Contacts were made with the State Vocational Rehabilitation and Social Rehabilitation Services without success. Plans were formulated for a Center on Deafness through the University of Arizona, but the Social Rehabilitation Services would not fund a community agency. GTACD wanted a direct service program.

In 1973, a series of events led to establishment of direct services and the present structure of the service agency. A conference of pastoral workers from Canada and the United States were meeting in New Orleans. Dr. Larry Stewart, then head of the Rehabilitation Counselor Training Program for the Deaf at the University of Arizona, was an invited speaker. He discussed the need for the Church to provide more meaningful services to the deaf and the conceptual problems with traditional religious education. A priest named Pancho Herrera had started a ministry to the deaf in a three state area—west Texas, Arizona and New Mexico and was coming to Tucson once a month. He attended the meeting in New Orleans and during one of his monthly trips talked with Dr. Stewart. He agreed to check on the possibilities of a social service program for the deaf through the Diocese of Tucson and met with the Catholic Social Service Directors and a few other people. Catholic Social Services was an established community agency with a reputation for helping minority groups. The Director was also the son of hearing handicapped parents. A series of meetings resulted in a joint venture of GTACD and Catholic Social Services with the University in the background supplying the counselors. Catholic Social Services provided a room and a telephone but there was no money for staff. GTACD appointed Mrs. Annette Long, a daughter of deaf parents, as volunteer coordinator, assuming a supply of volunteer help from the community. Mrs. Long took the job part time but found that she was spending evenings as well as days being interpreter, receptionist and coordinator. The program lacked support from GTACD and after five months Mrs. Long stepped down.

With a new volunteer coordinator, Mr. Stuart Brackney who was beginning a master's program in rehabilitation counseling for the deaf, the services recovered and increased. By April 1974, the program moved to a three bedroom house owned by the diocese of Tucson. The deaf community helped to renovate and paint the house and the program took on the atmosphere of a social center. The program attracted 98 volunteer workers from the local and university community, primarily from families of the deaf and sign language classes. Public awareness was emphasized through appearances on radio and television and presentations before high schools, agencies and organizations in Tucson. Community service announcements were used by over 80% of the media. A comprehensive list of deaf persons and parents of deaf and hard of hearing children aided in identifying other deaf people in the community. Close coordination with the program on deafness, the three year grant housed at the University of Arizona, brought benefits such as financial support for interpreters and advice and staff aid to strengthen the counseling and referral services. At least 250 clients were seen and more than 2,000 services were recorded in the first 18 months. The program had demonstrated the need for a social service center but the staff was overextended beyond reason.

The second coordinator, after working a year without pay, resigned. The deaf organizations rallied to continue the service center with commitments to projects for financial assistance. An ad hoc committee on administration recommended a division of the coordinator duties into five positions calling for a director, a secretary receptionist, and coordinators for Counseling, Outreach and Information, Referral and Interpreting. Catholic Social Services assumed the salary of the secretary and GTACD implemented the appointments by January 1975.

COPD currently performs a wide range of social, vocational and personal services such as job referrals, interpreter aid, medical and housing assistance as well as individual and family counseling. During May 1975, 202 returning clients and 12 new persons were provided at least 640 services. The program is most likely to see a young deaf adult male requesting help with employment on the initial visit. Usually the person has attended a school for the deaf and prefers manual or total communication. A review of 150 clients showed a median age of 26 years with an age range from 6 to 87 years (Table 1).

TABLE 1

Age at initial contact:	Percent
17 or below	4.0
18 to 24	40.0
25 to 44	31.3
45 to 64	10.0
65 and over	10.8
Unknown	4.0

The ethnic history suggests that one out of every two deaf persons seen at the center is from a minority background. Although the 1970 census reports the county population as 24% Mexican American, 2.9% Indian, and 2.3% black, Table 2 indicates a greater number of deaf minority persons than expected from the general census. Few of these persons attend the meetings of the deaf organizations.

TABLE 2

Ethnic background:	Percent
White	50.0
Mexican American	38.0
Black	3.3
Indian	6.0
Other	2.7

Although more than half of the persons visiting the center requested help with job finding, the initial contacts often led to later calls for interpreters, counseling or other services. With only one interpreter in 1973, the program now arranges for 90 to 100 hours of interpreting per month. The development of the counseling services will be dealt with by Mr. Mike Milone in a separate paper.

1975–76 is seen as a critical year in the development of community services for the deaf in Tucson. The need for services and the capabilities of the program to answer these needs will be a prime consideration by the City in a study for funding a Center for the Deaf. This is the third and final year of the Program on Deafness grant with responsibility of the community agency for continuation of services. The Catholic Social Service Center continues to be the primary support for the program with increasing help from the deaf organizations, Lions and Sertoma Clubs, the Tucson Alumnae Chapter of Delta Zeta Sorority. But best of all, deaf people have given more time, skills and money to the service program.

The need for social services for the deaf in Tucson has been demonstrated. In spite of discontinuities of a volunteer program, deaf people utilize the program in increasing numbers. The alliance of GTACD, representing the deaf organizations, and Catholic Social Services, a catalyst agency, created a community services program. The contribution of the deaf citizen is being recognized. More alliances are needed to insure the deaf population of effective communication with the community at large.

REFERENCES

Craven, J. The Tucson association of the deaf story. TUCSON TATTLER, 1962.

Proceedings of the Workshop on Community Development Through Organizations of and for the Deaf (Eds. Crammate, A.B. and Schreiber, L.F.) April, 1961.

Schein, J.D. and Delk, M.T., Jr. National Association of the Deaf, 1974.

THE COUNSELING PROGRAM AT THE COMMUNITY OUTREACH PROGRAM FOR THE DEAF

Michael N. Milone, Jr., Coordinator of Counseling, Community Outreach Program for the Deaf, Tucson, Ariz.

Traditionally, the mental health needs of the majority of deaf adults have not been adequately satisfied. (Vernon, 1971) Few trained mental health professionals were available to work specifically with deaf persons, facilities intended for use by normally hearing individuals were not equipped to meet the special needs of deaf individuals, and the stigma attached to mental health problems was as strong within the deaf community as it was within the hearing community. Consequently, a deaf person experiencing anxiety as a result of the normal frustrations of daily life, or facing a developmental dilemma, was left to his or her own devices or the help of well meaning but untrained friends or relatives. In a few instances, sound advice could be had from a member of the clergy or a respected and capable member of the deaf community, but for the most part, the resolution of anxiety producing situations was unsatisfactory.

In recent years, however, agencies designed to satisfy the mental health needs of deaf adults have appeared in several communities throughout the country; one such agency is the Community Outreach

Program for the Deaf (COPD), of Tucson, Arizona. Founded through the efforts of the Greater Tucson Advisory Council of the Deaf and Catholic Social Services of Southern Arizona, this agency provides deaf people and their families with a variety of direct and indirect services, one of which is counseling.

One characteristic of counseling at COPD is that rather than being a single service, it is a constellation of services, the center of which is the one to one relationship between a client and a counselor. This relationship is supported by a number of ancillary services designed to assist the deaf person acquire the education, information, or experience necessary to make optimal use of personal resources, as well as the resources available within the community. The goal of the counseling program is to help the deaf person develop individual living skills, and the capacity to make mature decisions.

The rationale for adopting the constellation model is the belief that lower order, biologic needs must be satisfied before an individual can devote energies to satisfying higher order, social, ego, or developmental needs. (Maslow, 1954) The variety of services available in the constellation model enables the client to obtain assistance in satisfying both lower order and higher needs. The counselor who participates in this process is seen as a helper in every sense of the word, and by assisting the client meet lower order needs, paves the way for the satisfaction of the higher order needs that are the traditional milieu of the counseling relationship.

A second characteristic of COPD's counseling program is the use of objectives. In an approach similar to the Division of Vocational Rehabilitation's Individual Written Rehabilitation Program, the counselor is expected to develop, in cooperation with the client, objectives that reflect client progress through observable changes in behavior. This approach involves the client directly in the counseling process, provides the agency with a written description of client progress, and emphasizes for both the counselor and client the distinction between counseling and support activities.

The use of objectives at COPD is not a philosophy of counseling in and of itself; instead, it is a framework within which the counselor is able to develop his or her own personal philosophy. This framework is of particular importance at COPD, since all of COPD's counselors are graduate students in the University of Arizona's Rehabilitation Counseling with the Deaf program, and are in the process of developing their own personal philosophies of counseling. By using objectives, it is hoped that student counselors will develop their philosophies based upon information gathered in the classroom and the experience gained through actual client contact.

The counseling staff of COPD is an all volunteer one and is composed of University of Arizona graduate students. Since these students are fulfilling practicum and internship requirements, they are supervised by the Director of the Rehabilitation Counseling with the Deaf program of the University, as well as by COPD's Coordinator of Counseling. The Coordinator is responsible to the Executive Director of COPD, who reports directly to the Greater Tucson Advisory Council of the Deaf, Catholic Social Services, and COPD's Advisory Board.

Because of the close relationship between COPD and the University of Arizona, consultants are available from the University for those situations beyond the capabilities of COPD's counseling staff; COPD staff members in turn act as consultants to the University and to public and private agencies who serve deaf persons. The reciprocal consulting relationships thus established add necessary depth and experience to the counseling staff of COPD, while at the same time making the expertise of COPD staff members in the area of deafness available to other agencies.

The clientele of COPD consists almost entirely of deaf individuals of lower to middle socio-economic status; educational experience ranges up to the community college level, with communication skills being quite diverse. A unique characteristic of a number of COPD's clients is that they use Mexican sign language. Though no staff member is proficient in this communication method, several are learning, and much interest has been generated in this area; several staff members are also fluent in spoken and written Spanish.

Client's become aware of COPD's counseling program through several sources: agency referrals, personal referrals, public service announcements, and previous use of COPD's other services. When a client's needs dictate the involvement of the counseling program, an initial contact is made by the Coordinator of Counseling. This contact serves as a screening interview, in which an evaluation of the client's counseling needs, communication skills, and other relevant considerations is made; the client is then assigned to a counselor selected by the coordinator. Counselor selection is based on the Coordinator's evaluation of both the client and the counselor, and is an attempt to assign the client to the counselor who is best able to provide assistance in this particular situation. The counselor and client are introduced immediately after the screening interview, at which time they begin the first counseling session.

During the first session, the counselor has the responsibility to achieve three objectives: to begin the process of establishing rapport with the client; to ascertain the nature of the situation for which the client is seeking help; and to gather the information that is necessary for the agency and the counselor to meet this client's particular needs. This final objective, the gathering of information, has long been a point of contention between clients and service agencies. Deaf persons, or for that matter, normally hearing persons, often become frustrated when they are required to spend much of their first counseling session filling in forms and divulging information that seems to have little relevance to the matter at hand. The intake form at COPD has therefore been designed to eliminate much of this frustration: the information to be gathered during the first interview includes only those facts necessary to resolve the specific situation for which the client is seeking help. Subsequent information is sought only on a need to know basis, and both the counselor and client are involved in completing the necessary paper work. Though the information gathered in this fashion is not extensive, it is sufficient to enable the agency to serve the client, and to provide the data necessary to seek funding and evaluate agency progress.

Evaluating COPD's counseling program at this time is difficult, since it has been in full operation for only six months. Indications are, however, that the observed behavior of the clients who have availed themselves of the program has changed in ways that can be described as positive. Efforts are currently under way to develop an evaluation procedure that can add more validity to these observations, and describe in a more measurable way the change in client behavior. A further indication of the counseling program's success is the gradual change from a crisis orientation to one of prevention. Such a change suggests that clients are anticipating critical situations before they assume crisis proportions, and are either resolving the situation through newly acquired decision making skills, or are seeking help to do so.

COPD's counseling program does have one glaring shortcoming: it has thus far failed to attract the educated deaf adult. Though this portion of the deaf population experiences many of the same anxieties as those less well educated, they have been reluctant to use COPD's counselors to help reduce these anxieties. The reasons for this reluctance are several: the stigma attached to mental health services; suspected breaches of confidentiality; COPD's reputation as an agency for "poor" people; and the lack of positive experiences this population has had in working with mental health professionals. This situation may be changing, however, since more and more educated deaf persons are involving themselves in other aspects of COPD's services. Possibly, this involvement will generalize to the use of the counseling program.

Though the program faces a number of other difficulties as well, such as the lack of funding, a shortage of counselors, a surplus of clients, and limited facilities, it continues to grow, and represents a significant resource to the deaf population of Tucson. It is hoped that the deaf community will continue to support and increase its use of this resource, for their own benefit, and for that of the total community.

REFERENCES

Maslow, A. H. *Motivation and Personality* New York: Harper, 1954.

Vernon, M. Current Status of Counseling with Deaf People. In Sussman, A. E. & Stewart, L. G. (eds.) *Counseling with Deaf People* New York: Deafness Research and Training Center, New York University School of Education, 1971.

PERSPECTIVES OF A COUNSELING AND COMMUNITY SERVICES CENTER FOR THE DEAF

Edgar H. Shroyer, Ph.D.[1] Assistant Professor, Department of Education, Gallaudet College, Washington, D.C.

During the early 1960's at two national conferences on deafness considerable concern was voiced over the lack of services for deaf people by existing community agencies. The list of reasons for this lack of community involvement on behalf of deaf persons was long and varied. The list of reasons also depended upon which group of professionals in the area of deafness to which you were listening. The educators of the deaf had their reasons and the vocational rehabilitation professionals had their reasons. But when the total picture was analyzed, it was evident that there were, first of all, no community advocates on behalf of deaf people and, secondly, the communication at all being rendered.

---

[1] Formerly the Director, Counseling Center for the Deaf, Pittsburgh, Pa.

barrier which deafness imposes was often too traumatizing for community agencies personnel. This led to either minimal or no services

In order to explore this very real concern the Social Rehabilitation Services of the Deaf of Health, Education and Welfare funded several research and demonstration grants for a Counseling and Community Services Center for the Deaf in large metropolitan areas. The Pittsburgh Counseling Center for the Deaf (CCD) was a recipient of one of the grants. Over a five-year grant period the CCD demonstrated the need for such a community agency. The CCD continues to provide services to the deaf population of Western Pennsylvania through the support of local and state governments as well as the United Way. It continues to meet the original goals set forth in 1966, which were:

1. To increase the utilization of community services by deaf clients by imparting information to them on the availability of appropriate community services, to provide support to deaf clients so they are likely to use these services, and to provide consultation and interpreting services to these agencies in order to bring optimum benefit to deaf clients.
2. To develop new and more effective resources in the community to serve deaf people such as rehabilitation facilities, mental health facilities, public health facilities, new educational facilities and others.
3. To provide direct services to deaf clients where outside community services are not available or feasible.
4. To establish a program of adult education to the deaf designed to reduce the need for special services either within the Center or in outside agencies.
5. To provide for the training of personnel working with deaf people.

A description of specific services which a Counseling and Community Services Center might offer a deaf population of a large metropolitan area will help to illustrate the need. Some are services which one might perceive as being provided directly by the Center. Others are services that might be provided by other agencies with supportive services being rendered by the Center (Goal #1). A discussion of the different services will make this apparent. Before beginning, it is important to make special note of how money to support each service might be obtained. This may vary from city to city and state to state, but getting the dollars for services is crucial for obvious reasons. Although the services are listed individually, there may be considerable interaction among them.

Interpreting services

Interpreting services appear at the top of the list because they bridge the communication barrier between the deaf client and other individuals. Not often provided at the Center, these services may be provided in any of the following settings: educational, funerals, marriages, medical, job interviews, crises intervention, psychiatric, mental health, vocational, public assistance, child guidance, religious, and so on. The possible settings are almost endless. The purchaser of these services might be the courts, vocational rehabilitation, the deaf client, employers, MH/MR programs, public assistance, community agencies and churches.

Interpreting services are best handled by a Coordinator of Interpreting Services who would have several functions: arrange schedules of interpreters in ongoing settings, i.e. colleges, and vocational training programs; contact community agencies to notify them that interpreting services are available; interpret in short term or one time situations; conduct inservice programs in manual communication for community agencies and perform activities in other areas requiring the coordinator's expertise.

Prevocational services.

Unfortunately, low achieving deaf clients are often excluded from diagnostic and evaluation programs, training programs, sheltered workshops and immediate job placement. The most prevalent reason for this is their lack of ability to communicate in any form with professionals in these areas. The Center, through Vocational Rehabilitation and/or MH/MR funds, could teach these individuals basic communications skills enabling them to participate in activity of day living (ADL) and prevocational activities. Occasionally, it is not only the low-achieving deaf client that needs some of these skills. Prevocational services include learning to use public transportation, telling time in order to arrive on time, budgeting money, cooking and cleaning responsibilities, interaction with others and so forth.

Consultation and education services

C&E is provided to other community agencies in order to assist them in becoming more accessible and useful to deaf people. C&E is also provided to potential employers to alert them of the assets deaf people possess and how they can contribute to the job. The psychology of deafness, manual communication classes, and other services available in the community for deaf clients are all part of the C&E program. In some cases C&E is on-going throughout the year to agencies having established programs for deaf persons in order to train new staff members and retrain previous staff members, i.e., state mental institutions, halfway houses or interim care facilities and comprehensive rehabilitation facilities. Funds for C&E might come from MH/MR Programs and third party contracts.

Mental health/mental retardation services

MH/MR services generally consist of prevention, after-care, and consultation and education. Funding may come from a County MH/MR program or a base service unit (BSU) within the county on an individual client basis. The situation in Pittsburgh is such that there are 11 BSU's. To provide interpreting and consultation and education to all eleven would not be feasible because of staff turnover, and prevalence of deaf persons residing in the catchment area who might avail themselves of MH/MR services. Therefore, the service is provided through the Counseling Center once authorization is gotten from the appropriate BSU. Sufficient data exists regarding deaf persons to substantiate the need for MH/MR services throughout the county.

Personal assistance—referral service

A large percentage of the deaf clients seen at a Center will probably fall into the above two categories. They may be referred to another agency for assistance with the Center providing only interpreting services. Examples of such referrals would be for adoptions, application for Social Security, Public Assistance, Vocational Services, legal matters, and marital counseling. Personal assistance that can be rendered at the Center would consist of such things as insurance applications, accident reports, general information and counseling. Generally, for personal assistance services, the deaf client is responsible for payment.

Educational services

This service is dependent upon local situations. The original concept of the Counseling Center included adult education which responsibility was eventually relegated to the local Adult Basic Education (ABE) Program with whatever supportive help necessary provided through the Center. Multiple-handicapped (M–H) deaf students not accepted in or terminated from educational programs are in the Counseling Center's program at the Home for Crippled Children. It is a pre-vocational-educational program with the long range goals of employment and self sufficiency. Large numbers of H–H deaf students continue not having educational programs available to them in spite of the warnings of researchers in the early 1950's. Someone has to meet this need.

Work diagnosis and evaluation services

Several evaluation systems are available for ascertaining the deaf client's interest, behavior and performance, and then relating these factors to work capabilities. The Jewish Educational Vocational System (JEVS), Towers, Singer Graflex, with some adaptations for deaf persons are useful. Having evaluators skilled in communicating with low-language deaf clients is a must in order to get a reliable picture of the deaf client's potential. Too often deaf clients are put into D&E programs with evaluators unwilling and unable to communicate with them which leads to frustration and untapped potential of the deaf client.

Housing facilities services

A halfway house for deaf transients, released state hospital patients, over-protected or unwanted deaf children is definitely needed in every large metropolitan city. The facility could be operated by a center or consultation and referral could be provided by the Center to another agency. Ideally, the housing facilities would lead to independent living in the community. A group home situation where there is round the clock supervision in activities of daily living would be the first step. A supervised apartment would be the next step with counselors on call 24 hours a day. Finally, independent living with monthly checks by a counselor would achieve the original goal.

Manual communication classes

American sign language appears to be very much in vogue at the present time. The response and interest in classes has been phenomenal throughout the country. The provision of classes serves to educate the professional and lay person about deafness and its ramifications. Classes can be offered to agency personnel or to the public. In 1974 approximately 450 people in the Pittsburgh area attended sign classes, usually paying $20.00 per class.

Job placement services

These services are time consuming, frustrating, and thankless, but nevertheless, are extremely important to the deaf client. Cross referrals should be made between the Center and the Bureau of Employment Security (BES). Ideally one or two contact people at the BES should be established to facilitate job placement activities.

I have listed several services that a Counseling and Community Service Center might offer deaf clients independently and jointly. It is important to remember that these services cannot be provided in a vacuum. The cooperation and understanding of other agencies is paramount to the total success of the Center's program. The Counseling Center in Pittsburgh is fortunate to have developed a fine working relationship with several other agencies that have established programs for deaf clients (Goal 2).

The Home for Crippled Children (HCC) in Pittsburgh provides residential care for M-H deaf young adults. They in turn contract with the Center to provide a pre-vocational-educational classroom for these students. This past year 13 students were at the HCC with 7 of them participating in the class. The remaining 6 were in vocational training programs in the city and received individual tutoring and counseling from the Counseling Center's program coordinator.

Transitional Services (T.S.) provides housing for deaf clients. Depending upon the needs of the deaf client, he is put into one of these types of apartment groups, supervised or independent. Weekly group metings are held with all the deaf clients in the program for A.D.L. and social interaction. Individual programs are designed and conducted by the Counseling Center on an ongoing basis for each deaf client in T.S.

Dixmont State Hospital is an inpatient facility for psychotic deaf persons. A.D.L., counseling, tutoring and communication skills are provided on a weekly basis to all the deaf patients. Those deaf patients having the potential to return to the community are provided individual counseling preparatory to community living.

C&E services are provided to all three of these agencies on an ongoing basis.

The need for a Counseling and Community Services Center for the deaf community of a large metropolitan area has been illustrated through a brief discussion of the different services which can be rendered by the Center. All that is required for the fruition of a Center is a little imagination and some hard work.

THE WEST'S MODEL FOR PUBLIC AND COMMUNITY EDUCATION ON DEAFNESS

Armin G. Turechek, Ed. D., Project Director, Program on Deafness,
Rehabilitation Center, University of Arizona, Tucson, Ariz.

A new model for developing a services delivery system for the deaf living in Tucson was developed two years ago and submitted to Region IX of the Rehabilitation Services Administration. Funds were approved for a three year project. Now completing the second year of operation, significant findings have been made that should influence future service systems that are developed.

Historically, delivery of services to the adult deaf, either directly or indirectly, were patterned on four different models. The most common was a central agency with counselors and interpreters available for the deaf when they came in for help. Referrals to other agencies for counseling, financial assistance, housing information, job opportunities, etc., were typical of this type of facility.(*1*) Information about the other agencies was given and arrangements made for an interpreter to meet the client at the selected places. This required duplication of effort on the part of the deaf client: first in going to the service center and then to the agency capable of giving the service desired. Once there, the client had to hope the interpreter would be there to help him conduct business.

The other three models were more specific in the types of service they provided since their primary concern was evaluation and training of their clients. Boston was the site of one model which was developed at Morgan Memorial, Inc.

> MMI has intended services to be comprehensive in scope from the point of initial contact with the client through job placement and follow-up. The program evolved as a logical extension of the education process and provided individualized services on a broad base to evaluate the person's current functiontreatment/training as indicated and aavilable.(*2*)

The model developed by the Jewish Employment and Vocational Service in St. Louis was designed for clients preponderantly multiply handicapped and grossly deficient in personal and social development.

> . . . , accordingly a major emphasis has been social development (habilitation), implemented both through intramural programming and through extension of services into the community (foster homes, family counseling, social clubs, etc.) (*3*)

The Hot Springs Rehabilitation Center provided a model in which a "laboratory" for evaluating the overall feasibility of providing services to deaf persons within a large, comprehensive rehabilitation facility for handicapped hearing people.

> Concurrently, a program of services meaningful for deaf persons is being developed as needs are documented through demonstration.(*4*)

A radically new concept of delivering services to the deaf in the Tucson, Arizona, area was developed by Dr. Larry Stewart of the University of Arizona. This model was to be developed over a three-year span and had five aims:

1. To reorganize and staff the program of services presently provided by the Rehabilitation Center in order to develop a comprehensive range of rehabilitation services tailored to meet the special needs of deaf individuals. These will include counseling and referral services.
2. To utilize the newly organized program for the deaf within the Rehabilitation Center as a central locus of efforts to establish a community delivery system for the deaf.
3. To assist public and private agencies and organizations within the Tucson community in increasing their capabilities for serving deaf children, adults and their families.
4. To foster greater public understanding and acceptance of deaf children and adults in the Tucson community.
5. To develop, and to assist other agencies to develop sources of ongoing funding for program activities on behalf of deaf individuals.

In further refining these aims as the project swung into operation and gained experience, it was found that one of these goals was unrealistic—that of developing a basic counseling and referral center for the deaf community within the Rehabilitation Center. The Rehabilitation Center operated primarily on income received from client services and the major source has been the Division of Vocational Rehabilitation. For the counseling and referral service for the deaf to develop and exist within the Rehabilitation Center it would have been forced to seek operating funds through the Division of Vocational Rehabilitation through payments for sponsored clients. Only a small percentage of the deaf community qualify for DVR services at any given time. Therefore a counseling and referral center for the deaf did not seem feasible.

To focus the activities of the project staff, a census of the number and needs of the deaf community was conducted. Prior to the completion of the census, the project staff started on activities to meet the needs of the deaf that had been demonstrated through national surveys and studies. With the completion of the census, the staff was able to concentrate on those areas of greatest concern to the deaf in Tucson.

The determination of the needs on a national scope started with a study of the famous Babbidge Report (*5*) and the recommendations of the Conference resulting from the Report.(*6*) Recommendation number 4 of the group discussing the needs of the over 22 population stated: "Federal support is needed for a national network of community centers providing informational, coordinating, counseling and referral services for the deaf. These should be distributed within commuting distance of almost all deaf people."

Recommendation number 5 of this same group stated, "Broad informational and educational programs on deafness should be devised to reach medical personnel, potential employers of the deaf, parents and relatives of the deaf, community agencies and the general public." Recommendation number 6 proposed, "The deaf themselves should be given leadership training and opportunity at federal, state and local levels, with support for leadership training workshops and advanced study. The deaf should also take part in planning and executing new programs." Recommendation number 13 stated. "There should be federal support for classes in manual communication, both for the deaf and for interested hearing persons."

In accordance with recommendation number 4 above the project staff decided one area of concentration should be referral services for the deaf. It was decided to focus on assisting all community agencies improve their ability to serve the deaf by utilizing their existing staff to the maximum. A survey of community agencies revealed that most had personnel knowledgeable about deafness and with sufficient manual communication skills to work with deaf clients. Where skilled persons were not found, training programs in manual communication were set up with designated volunteers from the agency taking part. The first class was established in the Welfare Office where fifteen staff members participated. From this experience however, the project staff came to the conclusion that classes should be smaller and that the material used should be more relevant to the needs of the agency personnel.

Classes were set up for personnel in the two Social Security offices in Tucson but only three staff members from each office were invited to participate. The course was developed to meet their needs by obtaining a copy of every form used by the Social Security agents, extracting all questions used and building a vocabulary of answers that could be expected. Intensive training was given in the signs for the questions and for the expected answers. In this classes as with all community contacts, a course in orientation to deafness was given in which an explanation of the problems of the deaf along with methods of overcoming these was presented.

The project's aim was to improve services for all hearing impaired individuals regardless of age of onset or method of communication. An extensive program in orientation to hearing loss in elderly persons and means of improving their communicative skills as well as preventing the isolation of the hearing impaired was given to the staff members of the Tucson Jewish Community Center. TJCC is involved with about 600 senior citizens in recreational programs and in serving hot meals.

The same service was offered to officials at the local housing authority. From these contacts a special form was developed to be completed by the individual indicating if there was a hearing loss and the possible cause. The questionnaire form used by the National Census of the Deaf was used to obtain some indication of the degrees of loss. Interestingly, it was found that about 25% of these elderly citizens had a hearing loss of such a degree that it prevented ease in communication.

In this same context of community service, the project staff became involved in various training programs offered to businessmen, in furnishing interpreters, and in cooperation with the Community Outreach Program for the Deaf. Articles were written for consumer groups for dissemination among businesses giving information on recognizing and working with the deaf shopper. More than 1250 hours of interpreter services were arranged each year to help find jobs, improve work adjustment, to enable the deaf to participate in civic meetings, and in adult education classes.

Lectures and sign language courses were also given to agencies working with deaf trainees and to city and county employees who might have opportunity or need to communicate with the deaf. Work was done with the correctional system to assure that offenders were screened for a hearing loss. The police academy and the sheriff's training academy included a lecture by the staff personnel in recognizing the deaf and precautions in not misinterpreting the gestures or movements of the deaf.

The project also worked closely with the Community Outreach Program for the Deaf, an agency established two years ago by the Greater Tucson Advisory Council of the Deaf and the Catholic Community Services. Most project staff were involved in the direct services offered by COPD or by participating on the Advisory Committee of that organization.

Recommendation number 5 of the Conference spoke of the need to bring information to the general public, parents, and employers, and these were the objectives of several of the project's programs. Through efforts of one of the project staff, deaf youth were included in the summer work-experience program at Davis Monthan Air Force Base. In preparation for the arival of these deaf persons on the base, an extensive 60 hour sign language course was presented to the Base supervisors. Between 25 and 30 deaf youth were thus given the opportunity to experience a real work situation in which they would have to adjust to the hearing supervisors. The supervisors felt comfortable with the deaf around because of their communication ability which led to a very successful experience.

Television newscasts were begun after a fund raising compaign conducted by the project staff. None of the commercial stations were interested in this type of program and only the public broadcast station was willing to carry it, however, due to financial problems of the station, it was necessary to pay for the time involved. Publication of a quarterly newsletter that is widely distributed in the Tucson area brought news of the project's activities and of the deaf community to the attention of many civic leaders.

Three workshops were held involving professionals, parents and the deaf. Conferences with business people in Tucson led to job develment for the deaf. A discussion with the Postmaster and the personnel officer at the local Post Office led to the hiring of a number of deaf under the special hire program. Conferences were held with the personnel at the local Board of Education which led to the hiring of one deaf professional and may lead to other opportunities for the deaf.

Public school teachers have come to rely on the project staff for presentations on deafness as part of their classes studying the five senses. This has become a very popular feature with requests coming from all schools in the area. A wide-ranging survey of all businesses in the Tucson area is underway to determine their hiring practices as far as the deaf are concerned. Their needs regarding knowledge of sign language, orientation to deafness, or work-adjustment counseling for the deaf employee will determine the activities of the project for the coming year.

Concern for leadership development among the deaf was expressed in recommendation number 6 from the Conference and the project staff worked to improve the situation in Tucson. The theme of one workshop conducted by the staff was "Leadership Training for the Deaf". Emphasis during the day long meeting was to introduce the deaf to the political processes and how they could become involved in developing proposals for better services for the deaf. Following this workshop the project staff assisted members of the Greater Tucson Advisory Council of the Deaf in developing and presenting a proposal for establishing a Community Center for the Deaf. As a result the City Council set aside $2500 from the Model Cities Development Fund to implement a feasible study of this center.

Recommendation number 13 of the Colorado Springs Conference emphasized the need for sign language classes which was also recognized by the project staff. Not only was skill in manual communication desirable but also awareness of deafness and opportunities in working with the deaf were concomitant benefits. Sign language classes were offered in three area high schools with credit given as a foreign language. Classes were also offered at vocational training and evaluation agencies where deaf clients were located. A special vocabulary of 336 signs was developed for use in these agencies with a minimum of 150 most used signs on the "must know" list. Publication of a special sign language book for use in these specialized agencies such as Goodwill, etc. is being considered.

The project has proven its value in a city with a relatively small population of deaf. However, Tucson probably has as varied a population of deaf as any city in this country with a number of professionals employed at the University and the school for the deaf and a sizeable number of deaf Mexicans who have had a minimum of education. The Indian population is considerable and their life style is also different from that of the majority of the deaf. Providing services for such a diverse group has been a challenge and was always interesting. The acceptance of the project by the deaf population and the reliance of this group on the project for help and advice has been proof of its value.

BIBLIOGRAPHY

1. Ethridge, Willis A. "Delivery of Community Services to the Adult Deaf," *Hearing and Speech News*, (September–October, 1970), 10–11.
2. Jewish Employment and Vocational Service. *Patterns for Effective Rehabilitation of Deaf Adults*. (St. Louis, 1967), p. 34.
3. *Ibid*, p. 35.
4. Ibid, pp. 35–36.
5. Advisory Committee on the Education of the Deaf. *Education of the Deaf: A Report to the Secretary of Health, Education, and Welfare.* (Washington, D.C., 1965).
6. U.S. Department of Health, Education, and Welfare. *Education of the Deaf, the Challenge and the Charge.* (Washington, D.C., 1967), pp. 126–133.

THE EAST'S MODEL FOR PUBLIC AND COMMUNITY EDUCATION ON DEAFNESS

Lorraine dePietro, Materials Specialist, Public Services Programs,
Gallaudet College, Washington, D.C.

William Saunders, Director, Community Service Center for the
Hearing Impaired

PART I

The Eastern Model for Public and Community Education on Deafness is actually three models, since the projects to be described involves three community service centers for deaf people. The three centers have identical objectives, but serve different large eastern metropolitan areas. In this paper I will provide some background on the centers, list their objectives, and will tell some of their activities.

In 1974, Gallaudet College was awarded a Title I: Higher Education Act Grant by the United States Office of Education for a project entitled, "Community Services and Continuing Education for the Deaf in Three Metropolitan Cities." The cities chosen for the project were Philadelphia (Pennsylvania), Charlotte (North Carolina), and Richmond (Virginia). These cities were chosen as center sites to capitalize on three already existing local programs in the area of deafness.

The centers opened in fall, 1974, each originally with a director and one clerical worker. All directors are fluent in sign language; one is herself deaf and the professional assistant to the Richmond director is a young deaf man.

Each center has its office at a local community college, directly involving each college: (1) in recognizing a community situation which needs to be changed; (2) in effecting a change that will benefit the total community.

The choice of a college as a centralized place for referral services for deaf people is no coincidence. Implicit in the philosphy of the Higher Education Act is the encouragement of academic institutions to be involved in their community. The college setting is an appropriate choice since it serves a fundamental need of the deaf community, i.e. access to those educational programs and other activities of the college which will benefit deaf persons but which have heretofore been inaccessible to them.

The Charlotte Center serves from its offices at Central Piedmont Community College; the Philadelphia Community Service Center for the Deaf has offices at Philadelphia Community College; and the Richmond Center for the Deaf is located at the J. Sargeant Reynolds Community College. Each college provides office space to the projects and two of them provide, at their own expense, the interpreter support services for existing courses in which deaf people express interest. J. Sargeant Reynolds Community College provides the clerical help for the Center.

The objectives of the Centers are:

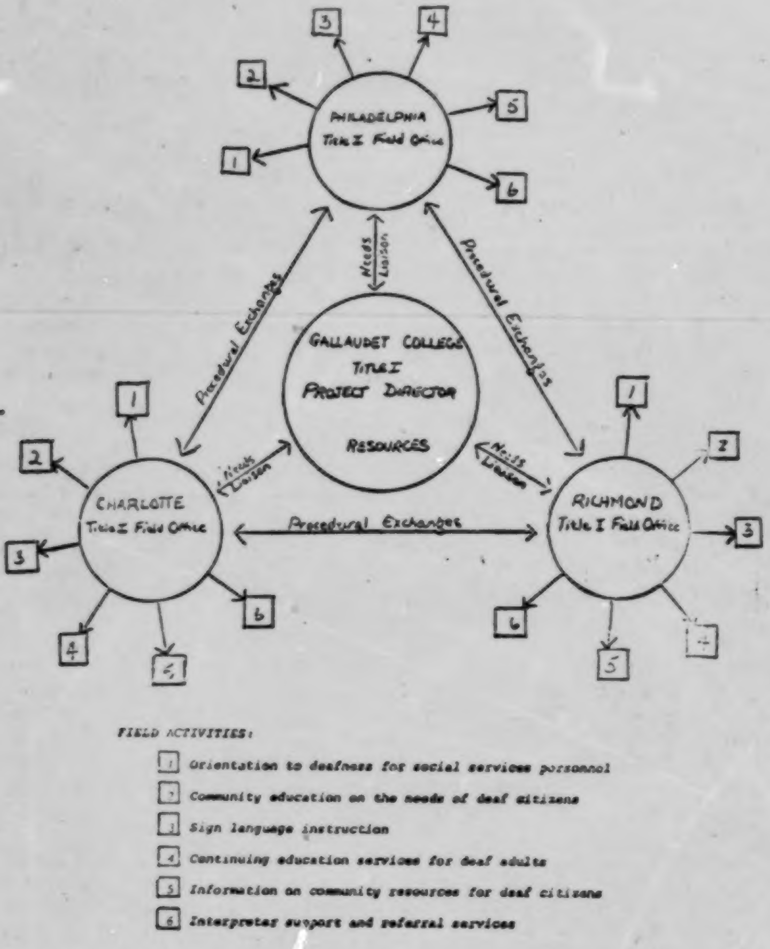
1. To educate three large metropolitan communities about the problems of deafness and needs of deaf people in continuing education and community services;
2. To provide personnel in local service agencies and continuing education programs with intensive short-term orientation to deafness programs;
3. To educate local government personnel in these cities of the need to be responsive to deaf citizens when designing public programs;
4. To assist deaf citizens in developing leadership skills in order to become their own advocates; and
5. To provide in these three local programs models that can be duplicated in other metropolitan areas.

Each program serves as a center of information on deafness for other agencies in the city, provides centralized referral services for hearing impaired people and supplements services available from other agencies in order to meet the needs of hearing impaired people. Thus, services to the deaf community are both direct and indirect. The first step in each Center was identification of the deaf community and its members, their occupations places of residence. The next step involves the deaf community itself. Through a needs assessment instrument deaf individuals can determine what their priority needs are within the community. As other needs become apparent, the Centers confront them.

The primary objective of each Center is public and community education. Who and how do the Centers educate? The faculty and staff of the host college are logical recipients of information about this special population to whom they are providing services. Other agencies who are prime targets for education efforts are:

area colleges
continuing education personnel

public school systems
law enforcement agencies
social service agencies
medical personnel
volunteer organizations like United Fund agencies
business groups


PHILADELPHIA
Title I Field Office
GALLAUDET COLLEGE
TITLE I
PROJECT DIRECTOR
RESOURCES
CHARLOTTE
Title I Field Office
RICHMOND
Title I Field Office
Procedural Exchanges
Procedural Exchanges
Procedural Exchanges
Needs Liaison
Needs Liaison
Needs Liaison
1
2
3
4
5
6
FIELD ACTIVITIES:
1 Orientation to deafness for social services personnel
2 Community education on the needs of deaf citizens
3 Sign language instruction
4 Continuing education services for deaf adults
5 Information on community resources for deaf citizens
6 Interpreter support and referral services

Model of interaction among community service centers for the deaf.

These are existing resources which are available to hearing persons. The aim of community education efforts is to make these same resources available to deaf citizens. (Figure 1).

Basically, short-term intensive orientation programs are the way the Centers provide community education to these agencies. All orientation activities are designed to prepare agencies to include deaf people in their regular array of services. If administrators are not aware that deaf persons have special needs or problems, these orientations instigate that awareness. Orientation aims to help them understand these needs and consider ways they can expand their services to deaf people. A completely successful orientation program could conceivably put the Centers out of business, since agencies would have learned to deal directly with the deaf client, retaining personnel with communication skills necessary for such services.

Deaf persons, too, are provided community education to familiarize them with resources they can and should seek. Leadership training programs designed for deaf adults have been offered in each of these cities to educate them in how to be their own advocates and demand their rightful share of services.

Each Center has been in operation for nine months. The staffs, although small, have served 380 deaf persons directly in the office. Telephone referrals number 75 for the Philadelphia Community Center alone. Activities for the Centers vary, but total figures for similar activities are:

Sign language classes—17 involving 250 persons for Richmond and Charlotte because Philadelphia Community College has ongoing sign language classes, they are excluded from the number cited above. Interpreting classes—4. Orientation to Deafness—2 in Charlotte; 1 weekly college credit class in Philadelphia; 1 social service personnel orientation; and 1 weekly workshop on deafness for Red Cross Youth volunteers in Richmond.

Continuing education classes involve deaf persons in the regular college program. Fifteen are registered in the Charlotte curriculum and 18 participate in the classes at Philadelphia Community College. Three continuing education classes for deaf adults have also been sponsored in North Carolina.

An interesting project is developing in Philadelphia. Senior aides, both of whom are hearing impaired, are working with deaf citizens in a special venture through the cooperation of the city government. One of these aides has usable hearing and functions as an arm of the Center into the deaf senior citizens community. As a liaison for both the Center and the community, this aide works on senior citizen housing problems and water and sewage bill mistakes and misunderstandings. This aide also refers senior citizens to the Center for personal problem solving and referral to other agencies.

The second aide is a black deaf person who interacts with the black deaf community and also assists with ongoing activities connected with the organization of a local deaf senior citizens group.

Both aides work half-time and are paid by the City of Philadelphia. Another special project in which the Center is cooperating is the establishment of a counseling center for the deaf in conjunction with a local mental-health center. This counseling center will assume the burden of working with social and personal problems faced by deaf persons. State funds are being sought for a training program.

PART II

Since September 1973, the Community Service Center for the Hearing Impaired has been addressing itself to specific problems of the hearing and speech impaired residents of the District of Columbia.

The inception of the Center was made possible through a grant from D.C. Title I Higher Education Act of 1965. The program is administered under the auspices of Public Service Programs, Gallaudet College. Capital City Association of the Deaf is co-sponsoring the program by providing facilities, referrals, and consultation.

This Center is located at the Capital City Association offices, giving it a unique proximity to the black deaf community which it serves. In this respect it differs markedly from the three centers just described.

Services to deaf persons at this Center are direct and/or indirect and involve community education efforts when existing resources can be utilized.

A few examples of Center involvement in community activities are pertinent here.

Recently the Washington, D.C., Metropolitan Police Department established a teletype system for deaf individuals. Prior to the inception of the system, the Police Department questioned its feasibility, regardless of the fact that the substantial number of deaf persons domiciled and employed in the District should have equal access to police services.

The Center compiled information for the Police Department regarding the deaf population in D.C., the number of Teletype machines owned by deaf persons, and names of other police departments with TTY machines to serve deaf citizens. Such varied agencies as the Offices of Demographic Studies and Public Service Programs at Gallaudet College, and Deaf Pride, Inc., were contacted for help. While compilation of information is not, per se, a noteworthy task, the end result of this work assisted the Center and a community agency in extending services to the hearing impaired population. This case in point exemplifies two functions of the Center: (1) To act as a Center on deafness for other agencies in the District of Columbia; and (2) to utilize existing resources in the community.

Another function of the Center is provision of support services to agencies in the city. In the legal setting these services are easily seen. The Criminal Justice Act makes it possible for deaf people to have proper representation in the judicial process by including interpreter services. However, deaf people in the District of Columbia have been arraigned or put on trial without the benefit of an interpreter. Without the services of a competent interpreter, a deaf individual is not properly represented. The Center has made personal contact with agencies involved in the judiciary process—Citizen Complaint Office, Criminal Justice Act staff, probation officers, judges, lawyers. Through contact with the Citizen Complaint Office, the Center has been successful in assisting deaf citizens to verbalize a justifiable complaint against others. Conversely, the Center has assisted the Citizen Complaint Office in making known to deaf individuals their legal rights in pursuing a complaint.

The Center has provided interpreter service for lawyers preparing their defense for deaf clients and interpreter services for courts in trials involving deaf individuals. The Center also provides technical assistance through referrals for psychological evaluation to determine whether or not a deaf individual is capable of understanding what is occurring in the judicial process.

The Center has accepted the responsibility of supervising probation for deaf clients. Of course, support services are provided to probation officers so they may work directly with the client.

In each of these efforts, contact with agencies, provision of support services, and coordination of available services, education and orientation are mandatory.

Some of the direct services offered by the Center include counseling, advocacy referrals to appropriate agencies and follow-up consultations, TTY answering service, and adult basic education classes.

Counseling, whether individual, family, or group, is rendered to those seeking assistance with family problems, delinquency, social inadequacy, and related personal concerns. In counseling situations, services aim to enhance and maintain the interpersonal competence and social functioning of an individual or group. Evaluation of the family setting in terms of needed homemaker services and social services is undertaken. Information on family planning is provided as needed.

When misunderstandings due to deafness arise in an agency, the Center will make a personal contact. These contacts and other programs developed to teach community personnel how to serve deaf people are helping to overcome the reluctance of public and private agencies to include deaf citizens in their regular service routine.

Referrals of deaf persons are made to those agencies which can best evaluate their needs and serve them. To assure that the deaf citizen has obtained the service for which he was referred, the Center has follow-up consultations with the specific agency.

An answering service enables deaf people with teletypewriters to make or cancel appointments, contact business concerns, insurance agents, or lawyers. This service is available daily.

The Center provides public health information on drug addiction, alcoholism, sex, hygiene, and public housing.

Adult basic education classes and communication skills classes are offered at the Center.

There is nothing unusual about the needs of the deaf citizen. They parallel those of his hearing counterpart. A comprehensive counseling and community service center for deaf persons can effectively and efficiently provide support services to community agencies so they can institute, upgrade, or expand services to the hearing-impaired population.

BIBLIOGRAPHY

Part I: Public Service Programs, Gallaudet College. Community Services and Continuing Education for the Deaf in Three Metropolitan Areas. Unpublished Project Proposal. Washington, D.C., April 1974.

Part II:

Craig, William. Counseling and Community Service Center for the Deaf. Pittsburgh Hearing and Speech Society, Pittsburgh, Pennsylvania. Final report of investigation supported by Social and Rehabilitation Service, U.S. Department of Health, Education, and Welfare, January, 1973.

Public Defender Service of the District of Columbia. Volume I: Policies and Procedures. U.S. Department of Justice. Washington, D.C.: Law Enforcement Assistance Administration. National Institute of Law Enforcement and Criminal Justice.

Public Service Programs, Gallaudet College. Community Service Center for the Hearing Impaired. Unpublished Project Proposal. Washington, D.C., June, 1973.

PREPARING DEAF YOUTHS FOR LEADERSHIP ROLES

Frank Turk, Director of Youth Relations, Director of College
Preparatory Studies, Gallaudet College, Washington, D.C.

The title of my presentation, "Preparing Deaf Youth for Leadership Roles," was conceived and is being brought forth to identify some of the effective ways by which our Junior National Association of the Deaf programs may be utilized in fulfilling our obligation to today's increasingly difficult task of building complete deaf citizens—positive, productive deaf leaders and followers.

Today's deaf youth want more and more to be heard, to become involved in the issues and decisions affecting a world of opportunities and responsibilities which they will gradually inherit. We should not ignore that desire, or brush aside with platitudes about how things used to be. It is for us to listen as we counsel, to provide ways for them to give as well as to receive, to show them by example that privilege and responsibility are partners, to help see that their boundless energies have better chances of doing good rather than harm.

More than ever before, our deaf youngsters need the guidance of sympathetic adults, deaf or hearing. A sympathetic adult is one who does everything possible in an informal setting to stimulate the mind of the youngster, igniting the flame that may help develop the power to perceive and instill that intelectual curiosity so lacking in deaf learners. The deaf student's learning can never be successfully imparted through an academic medium alone. He can be given the best formal academic preparation but the chance of his retaining it for any considerable period is questionable unless opportunities arise to put it to use in concrete situations. It is in the bull sessions, in the informal adult-student conversations and, above all, in learning motivated by practical experiences that deaf children come fully alive to the fundamentals of education. When a deaf student has contact with sympathetic adults and has an opportunity to discuss with them the essential ideas and ways of life, ways of utilizing the learning process, this is the heart and soul of education as distinct from mere learning.

Our young people's future success, in my opinion, will also be measured by the yardstick of their service to others. Education has little meaning unless it results in constructive use. Character as an intellectual commitment alone, for example, is valueless unless it is accompanied by living proof of the commitment. The substance of education thrives on convictions, involvement and attitude.

The most persistent problem in our efforts to develop leadership among deaf youth during my nine-year tenure as the Junior NAD director is lack of interest and faith of professional adults themselves in the ability of our deaf youngsters to take charge of the issues that both serve and affect their lives. I am referring especially to the lack of human sympathy and courage on the part of the adults from a wide area of leadership.

Human sympathy is a significant adult leadership qualification—a sincere concern for others, not a feigned concern for others aimed at a selfish gain. We must win the trust of deaf youth by deserving it, not by taking it. True leadership is "power with others rather than power over others," even in the military. A young officer, for example, is well-advised to continually ask himself this question: "What would I amount to if I did not have the rank? Would the troops follow me?" We in the adult leadership field need to continually ask this selfsame question of ourselves. Ortega said, "The select man * * * is the man who demands more of himself than the rest."

Courage, in my book, is another vitally important leadership component—the moral boldness which allows us to take "others-before-self" risks and to assume meaningfully the burden and responsibility of the decisions with and for deaf youth. Such willingness to accept responsibility for the consequences of the decisions is explained here as complete understanding of the reason, the rationale, for the decisions. It it, for example, the answer for the problem of the moment or is it the R-I-G-H-T answer with lasting benefit for deaf youth?

It has been said that the ability to have courage and to take meaningful risks are highly conducive to creativity. We cannot be meaningfully creative unless we are willing to venture into uncertain areas, to make decisions which may yield uncertain consequences. We must be able to anticipate consequences of our actions, and to plan, for the ability to develop long-range objectives represents sincere interest to which our young deaf people are most sensitive in their motivated efforts to become all that they are meant to be. They need honest leaders who know what the youngsters themselves are, what they can do, and what they may be able to be in the areas of leadership and followership. They seek and solicit honest leaders who know how to deal with and for them—those who resist the short-term in favor of the long-range needs of youth; those who continually serve as the "prodders" in their leadership and followership programs regardless of the consequences of the time-demanding, seemingly thankless job.

What passes for success in our deaf society today is often merely a dependency relationship with two weak people leaning on each other because they are unable to stand on their own feet. They would call themselves "friends" under ordinary circumstances while, in my opinion, their so-called friendship is simply a combination of weakness masquerading as a merger of strength. True friendship, to me, occurs when you place faith in and nourish the ability of others; when you are actively and productively involved with their abilities in making them identities with something special to offer, not just cogs in a machine; and when love and understanding dominate such involvement. It is a relationship of strength to strength, not of need to need. Many deaf people have the wrong concept of the words, "friendship" and "friends."

For example, it is commonly known that a boy does not really love a girl if he cannot get along without her. Only mature people can love. If you cannot survive without someone, you are not mature. Maturity is the ability to take responsibility for one's self. Successful marriages are not designed to compensate for deficiencies and insecurities. They are designed primarily to supplement our resources and abilities. Love knows the meaning of restraint. Dependency and exploitation do not. The common error among our deaf youngsters today is that of seeking in marriage a father or a mother instead of a husband or a wife—a relationship that is largely an escape from reality. They use each other as sources of security and pleasure, not as persons to love, escaping the duties of being a man or woman.

Sincere friendship from among our professional people is difficult to find for our deaf youth. This is definitely needed if the young ones are expected to live up to their capacities. Until this occurs more or less universally, we will have to develop in our youth some kind of self restraint or they may fall victims of peer influence. They will do what their peers expect them to do in our society, playing the roles the peers expect them to play, being concerned with trivia and ignoring the vision which we have for them. In short, they will be used by their peers to mutually develop reality—a form of exploiting each other in the process of destroying themselves. Peers cannot dictate that none be different from others in the group; that none try to excel, which would literally show the others up.

The words on a church board in a small Minnesota town apply here: "Pray for a good harvest, but keep on hoeing." This is relevant advice. How foolish it would be for a farmer to ask the Lord for a good crop when he failed to plant and tend the seed! His prayers for an abundant yield, of course, would not be justified if, after the seed had been sown, he did not cultivate and nurture it. He must protect it, and do his best at all times to produce a bumper crop.

Likewise, it is our job as professional leaders to cultivate and nurture deaf youth leadership qualities in this great land of ours. A majority of the physical, intellectual, emotional and social goals that we have set forth for our deaf children cannot possibly be achieved if we continue to insist on isolating ourselves from the younger generation. We must recognize and develop their leadership potential; we must know and understand contemporary trends and the implications of these trends; and we must know and understand the internal and external forces that affect them. This may sound corny to you but either you are wholeheartedly with youth or you are not with them at all.

Some of the focal points of preparing deaf youth for leadership roles on a continuing basis are as follows:

Self discipline.—Youngsters probably are more familiar with the term self-improvement, which is often used in place of self-discipline. Both terms mean hard work on ourselves by ourselves over a period of many years. When one has self-discipline, he is master of himself—he controls his temper, his thoughts, his actions; he is a king ruling the most difficult kingdom in the world: Himself.

Closely related to self-discipline is self-leadership, a forceful exploration and exploitation of one's potentialities. A self-leader is one who on his own initiative reaches out for an opportunity to do good; one who shapes his environment to develop himself into as complete a person as possible. People become leaders primarily to utilize their potential. Success thrives on pressure. Only rare individuals can perform anywhere near their capacity unless they are under some outside pressure. Youngsters must be made to realize that pressure is a good thing, that it is indispensable to their maximum total growth.

When one accepts an office, for example, he is, in reality, willing to utilize his potential—willing to accept failures in exchange for the opportunity to pursue success. This willingness to accept responsibility is the heart and soul of progress and growth.

Self-leadership is central to success. Any goal we consciously reach for is easily achieved, if we simply begin with conviction. Countering pressures represents our natural desire for growth. Those who achieve greatness seek such situations. Life is better because of them. Our young deaf people today must develop this as a built-in habit.

Ethical character.—Learning to work directly with people and gaining understanding of others as well as one's self are lubricants of total growth. Opportunities for this are greater in activity groups than the usual classroom contacts. Our young people seem to have the narrow attitude that they are in school only to study. They must discover that they can study and grow more human at the same time.

Ethical character refers to practical situations involving the standards of right and wrong in conduct, duty and judgment. The quality of the school often corresponds with the students' standards of performance; its morale has a strong resemblance to theirs. The setting of standards is a group process.

Fortunate are nonresidential students who have parents and home life as influential determinants of their attitudes and thinking. Such conditions enhance realization of the progressively higher levels of expectancy. As residential students are often deprived of these favorable home conditions in addition to the absence of aural experiences, they can easily become victims of understimulation and deprivation of the challenge to live their lives fully and vibrantly.

Organized Junior NAD group experiences under adults who are sympathetic to young people's personal needs and emotions can do much to minimize this. Young deaf people as a whole are easily offended by the mere suggestion that they have need for improvement. Often, their only reaction is self-justification and fault-finding. This habit makes them immune to benefits from the valuable experience of others and their own mistakes as well.

Inadequacies are basically opportunities for growth. Rebuke, even if not deserved, is an instrument of this growth. Pain and effort stimulate growth. Others will see their improved situation and learn from their example quickly. It is easier to lead others to happiness than to press them into changed habits.

Reading experiences.—Two kinds of experiences help formulate our characters—living and reading experiences. The latter experiences are referred to as books, magazines, and papers which tool ideas and attitudes into our characters. Reading is an outstanding compensation for both the loss of sound experiences and for what deaf youngsters lack in living experiences.

When a person authors a book, he is, in effect, putting into visible form, for the economy of our personal advancement, his thoughts derived from many years of experience from which we may gather ideas to accelerate our mental age. Our thinking is not bound by our chronological age.

Students tend to place the blame for their inadequate reading experience elsewhere. They must remember that they are in school to learn and that their teachers cannot teach unless they want to learn. Any deaf person's level of attainment, be it academic or industrial, is, more often than not the result of self-discipline in developing a passion for reading.

Vision.—Students do not accommodate a problem until it becomes a painfully visible reality. Occupational studies indicate that a great number of gainfully employed deaf persons are engaged in work for which they have no interest, from which they receive no satisfaction, or in which they fail to utilize fully their aptitudes and talents. They go through life unhappy and bored with no challenge in their jobs.

The causes of this may be interpreted as (1) their failure to recognize their high potential as human beings; (2) their erratic use of their abilities; and (3) the dedication of their lives to trivial and commonplace objectives—failure to see the real meaning and purpose of life during their formative years.

People close their minds to some things unless they are forced to face the truth. Their emotions very much determine their process of listening. Democrats, for example, are affected by emotional deafness when they listen to the issues of the Republicans, and vice versa.

A poster I saw in Washington, D.C. applies here. It portrays a man jumping from an airplane with a parachute. Beneath the picture are the words: "A man's mind is like a parachute; it is of no value unless it is open." We all must have mature minds—minds that find little difficulty in accepting basic concepts and in standing on issues we know to be right, rather than following the mass or the herd. This is especially important today for technological advances have drastically reduced the number of jobs normally available for deaf youth. A statement from the convocation address by the 19-year-old president of the Student Body Government of Gallaudet College applies here: "Employers today are interested in your ability to think for yourself. They want you to make suggestions in terms of improvements, new methods, and new products . . . and to think beyond the scope of your immediate work."

We would do well if our school programs could be expanded to include opportunities for informal contact with adults on a continuing basis—to acquaint students with the many conditions to be faced in the world of work. To be with adults is to learn and this frequently helps substantially to counteract the strong influences of exclusively childish, self-centered attitudes and thinking.

Inspiration.—A commencement speaker at Gallaudet College stated: "We are in the midst of a knowledge explosion; we must run just to stay where we are." Every man needs help today just to lead a normal life. Nowhere in the world can you find a successful man who achieved his success without the help of his fellow beings. The average deaf person performs below the level of his ability unless he is encouraged to undertake a project larger than the strength he feels. He is constantly in a struggle with himself and needs inspiring guidance to make the struggle effective. The inspiration he gains from others is valuable here.

Successful deaf adults can serve as sources of inspiration, using their own deafness as their initial qualification in inspiring in deaf youth a desire to achieve, and confidence that they have the ability to achieve.

Community service.—Education is a reward, not only an investment or a passport to a job. It is a gift of our heritage. We did not earn it. It comes to us as a result of the struggles of great men before us who sacrificed for the freedom we enjoy today. They had no thought of sharing in this freedom. They wanted only that we ourselves make payment for this through participation in community service—to build on the present foundation an even greater heritage for the incoming generations. They desire that we give the community the same love, time, and interest with which they built it. Hidden somewhere behind their hope for our active community participation is the fact that our personal growth is commensurate with our actual interest in that participation. They knew that civic pride and interest were the best weapons to combat self-interest and self-love.

Character development begins when one leaves oneself; when one finally sees people and things around him and when he starts to search for the relationship between himself and others. One's enthusiasm for learning and for the total school experience starts when one sees the relationship between himself and what is taught, as well as all community activities. A head senior at Gallaudet College, John Kaleta, aptly described this process as "temptations upward," the continual stretching of the mind and personally to be concerned with more than commonplace and trivial things. When this takes place, one loses his attitudes of apathy and becomes more seriously involved with his own learning process. He develops a sense of responsibility for himself and others. One must work for others in order to know oneself—to know what one is actually useful for and to know one's potential usefulness. The purpose of work is personal growth. Without this, one is simply subjected to the experience of education, an experience not likely to have much meaning or value.

Emotional control.—A message by a great deaf leader, the late G. Dewey Coats, will live long in my memory. It created an image that is not easily forgotten and has influenced the mode of my mental behavior to this day. Referring to the measureless wealth of potential among the deaf yet to be trained for productive use due to emotional reasons, Mr. Coats used this story to illustrate his point: One spring a boy watched moths emerge from their cocoons. Each one made a terrific struggle to free itself from the confining threads and the boy felt sorry for them. He got a pair of scissors and cut the threads of the last one. The moth died instantly. Puzzled, the boy went to his father and explained what had happened. The boy's father explained: "Joe, the struggle that the moth makes to free itself from the threads of the cocoon also frees from its body certain poisons. This is part of nature's plan for its survival. When you take away its right to struggle, it dies." Life, which is intended to be a struggle anyway, is like that for all the deaf. Take away our right to struggle and something within us dies.

My thinking is that struggle and sorrow are our most influential and effective teachers—not something negative. They create the powerful lessons in our school of difficulty—life. They exist for a very special reason—to provide us with situations that challenge our maximum growth and development. We are forced to elevate our standards and to tackle the corresponding pressures. We develop a charity strong enough to destroy all malice. From this pressure, we learn unselfishness, brotherly love, and are given a sympathetic understanding, all of which hasten the development of our latent powers, which we habitually fail to use. The termites of our adult personality—jealousy, envy, pride and greed are exterminated and as a result, emotional maturity steps in and our impact upon others is wholesome.

If students will strengthen themselves in their Junior NAD work to the extent of being able to attack their difficulties with the attitude

"What is the world trying to teach me now?" and each in his own way and place spreads the lesson in Mr. Coats' moth example, they will have done a great service for humanity. They will have developed a pattern of conduct with which they can effectively convince others that adverse conditions are indispensable to complete growth; that the strongest habits are born and bred among the trials and struggles of life.

I hope that I have given you some ideas on how to prepare deaf youngsters for leadership roles and that you all will personally join me in keeping on hoeing!

OCCUPATIONAL OUTLOOKS FOR DEAF COLLEGE GRADUATES

Maryilyn Ware Galloway, Placement Officer, Gallaudet College, Washington, D.C.

I am very pleased that Dr. Stewart has asked me to address myself to this issue of Occupational Outlooks for Deaf College students because it is a topic about which I have some strong feelings and a reasonable amount of knowledge.

And it is an issue which should be of particular relevance to those of us who would define our basic job parameters as the concern for the total education of hearing impaired youth.

As we all realize there are a multitude of postsecondary programs that are literally springing up all across the country. Towards these programs we are sending or pushing a sizable number of graduates from our secondary schools to pursue an education that may ultimately enable him or her to compete more successfully in the labor market.

Although few of us would accept the concept that this should be the only motivation for seeking advanced education, it certainly has been until now one of the prime factors for the attainment of an advanced degree.

But, today we are suddenly finding ourselves launched upon a new era in the evolution of man and his employment. An evolution which is forcing us to re-contemplate the entire area of vocational and career development as well as forcing us to reevaluate the role that our educational institutions may play in their formulation.

I would like now to briefly touch upon the history of education and its relationship to the factor of employment. Although, I will be generalizing my comments to the hearing population, much of what has transpired in our relatively short history is easily transferable to the field of deaf education.

The past

In the initial stages of the evaluation of American higher education institutions were primarily developed with an elitist philosophy which promoted the concept that a select group of persons, primarily white Protestant males of considerable wealthy lineage were destined to be educated at a small group of exclusive schools and upon graduation from these schools were to assume their "God given destiny", by being granted the few professional positions established in the fairly rural society.

Little attention was given in these institutions to specific professional training except in the areas of the ministry, medicine, education and law.

As our political and economic system unfolded additional emphasis was placed on formulating additional liberal arts opportunities as well as the establishment of advanced technical preparation to meet the spiraling demands of a vastly expanding industrial and military complex.

Although higher education became accessible to a greater number of students the majority of all those in our colleges were still from financially and/or socially prominent families.

Following World War II and the establishment of the GI Bill and the Vocational Rehabilitation Act higher education became a very real alternative for thousands of individuals who had been heretofore excluded for financial or social reasons.

College enrollment became a much more democratic process; a democracy which is being furthered today with the introduction of open enrollment.

While the demographic makeup of the student body has changed drastically during the first two hundred years of academic evolution as well as the breadth of majors offered, two variables in the college scheme have remained fairly constant:

(1) The higher one's educational attainment is, the greater one's lifetime earning power will be;

(2) A college degree is a key for unlocking the door to more challenging and satisfying careers.

These two variables are constant and demonstrable, or were until 1975.

The future

Economists from Harvard to Washington are beginning to tell us of a new age in American society which has descended upon us without much warning and which is predicted to remain with us during the next decade at least.

The implications of this economy on the college graduate entering into the labor market may be profound with the final impact of the next few years having somewhat of a shock on our educational system.

The College Placement Council which is composed of thousands of college career planning officers and an equal number of major employers from all over the United States has just concluded its first national conference in Washington, D.C.

During the course of their deliberations four present day career phenomena were repeatedly mentioned as areas of recent development.

These phenomena included:

(1) The age of Economic Democracy which is a new phrase being coined by the economists. Basically what this means is that social scientists are seeing a major shift occurring in the earning power of Americans. And what it seems to indicate is the fact that college and non-college graduates will statistically now be earning similar amounts of income during their life times;

(2) The fact that the number of jobs for college graduates are not increasing at the same rate as are the number of graduates seeking to fill these positions: (An example of this is shown in the fact that by

1980, if present conditions remain, the field of education is predicted to have an excess of nearly 700,000 teachers.)

(3) The indication that a greater number than ever before of college graduates are avoiding the labor market by applying to enter graduate school. This of course is a very temporary retreat from their employment problems.

(4) A trend which seems to indicate that a higher level of education will be demanded for basically the same job which once required a lesser degree. At the same time there is no indication that the job responsibilities will change to meet the advanced training demanded.

Because this fact at present appears to be almost irreversible it could create two added factors of frustration for today's youth: boredom with work and disillusionment with a wide number of entry level jobs. This "over-training" could take a drastic toll in the form of the destruction of human motivation.

Implications for deaf college students

Contrary to what some elements of our society may feel, one is almost "better off" in today's labor market if one is deaf, female or a member of a visible and/or verbal minority.

The current wave of unemployment and underemployment is, in part, being offset for the hearing impaired by the force of the Affirmative Action Program and the Rehabilitation Act of 1973.

We are finding that students, who have a reasonable respect for the realities of the labor market with the determination and confidence to assertively pursue employment are obtaining fairly meaningful employment.

Agencies, schools and private business are actively seeking the qualified deaf person who is well-trained, confident and mature.

We are encouraging our students to take advantage of this affirmation action tide for just as long as it will last.

However, we are equally quick to point out to the student that obtaining employment is just the first step of his future career and that it does not guarantee success, satisfaction or upward mobility.

Actually it is this later fact of job advancement in addition to an initial placement from colleges which will concern our placement office this coming year.

Implications for the education of the deaf

Finally, because of the makeup of this convention as well as the inseparable cause and effect factor that education plays upon the factor of occupational success, I wish to address my last remarks to those of you who consider yourselves accountable to the educational system, especially the students within this system.

My recommendations to you include the following:

(1) Recognize the economic and political factors which have such an impact on our lives and prepare your students to do likewise;

(2) Develop a career education program in your institution and community which will service all ages from the very young to those who desire to change careers or find a purpose in retirement.

(3) Do not counsel your students to do as you did, but expose them to a broad range of career alternatives and a cross section of deaf adults.

(4) Consider all career families as being feasible pursuits for our hearing impaired students.

(5) Never assume that a school will ever have all the resources to educate our students to their fullest potential. Let us open the gates of our "youth ghettos" to industry and the world to make use of the many resources.

(6) Be careful not to cite financial benefits as the prime motivating factor for obtaining a college education. Rather hold in high esteem the ability to assume trained leadership; the capacity for inductive and deductive reasoning and ability to make logical and productive decisions. These capabilities coupled with a positive self-esteem and assertiveness are still the primary factors for success in the vast majority of occupational endeavors. In this day and age doors are being opened in virtually all areas and are waiting for the educated, self-respecting person.

(7) A knowledge of the 3 R's is not enough in today's complex rapidly evolving society. As I have mentioned before, but can never overstress, the attributes of self-respect, identity, confidence, flexibility, assertiveness, decision-making and reasoning are those attributes which will permit a person to proceed steadily in any labor market.

In conclusion, I can say that I am optimistic about the occupational outlook for deaf college students. Perhaps the present economy is forcing us to evaluate our educational institutions and this in itself is a healthy thing.

And we are now being compelled to ask students to believe in themselves. But after all isn't that what they the students have been asking for all along? Maybe now we will have to "listen".

CURRENT OCCUPATIONAL OUTLOOK FOR THE DEAF TECHNICAL VOCATIONAL SCHOOL GRADUATE

William Woodrick, Coordinator, Orientation to Deafness,
University of Tennessee, Knoxville, Tennessee

The current occupational outlook for the deaf person graduating from the technical or vocational school program depends upon a variety of factors. Assuming the deaf graduate has received sufficient training to enable the individual person to be ready for employment there are a number of factors affecting occupational goals of all vocational technical graduates today. These are factors relating to the economy and our social development. It is evident that the stability of the economy and social milieu affecting life are always changing, particularly during the next few years. Many economists are predicting minimal growth or a decline, few if any are predicting rapid growth. Social and economic changes are occurring rapidly and will be a significant factor affecting all young people.

The professional in the field of deafness must, as all persons, keep abreast of current activities plus look toward future trends in preparing youngsters for future community adjustment. This is a particularly difficult task in the absence of a crystal ball. We can, however, explore answers from those resources whose main concern is business and economics while hoping that they are correct in their predictions. The Department of Labor makes a variety of forecasts with some rather specific numbers and predictions regarding occupational outlooks. We may utilize some of their general predictions without specifics.

Some trends in occupations during the next five years are toward a decrease in the work force involved in goods production. The increases will be in services areas. Agriculture and fields related to food production seem to be leveling off from a bad decline in work force.

We may, therefore, make some assumptions relative to the outlook for the completely trained deaf worker. Those persons with skills in service occupations have a more positive outlook.

Health services are especially needed and many vocational-technical areas are suitable. Nursing care, geriatrics, paramedical, and medical laboratory are some specific occupational areas for the deaf vocational technical trained person.

Government services are predicted continual expansion. Federal, state, and local government employees comprise a large percentage of the labor force. The field of law enforcement, fire protection, parks and recreation, natural resource conservation are areas for consideration. The variety of opportunities for deaf persons in general should fill the personal interests and needs.

Service occupations related to people and property including such areas as plumbing, heating, and appliance repair, as well as clerical and office type jobs are among those needs predicted over the next five years. Those areas requiring four years or more college degrees will decrease. It is predicted that more than 75 percent of the future jobs will require postsecondary school training but not college degrees.

It may therefore be assumed that the vocational-technical trained deaf person will have the edge on the job market—at least above the Liberal Arts Education person. Jobs will require more specific technical skills generally provided in the technical school be it one, two or a five-year training program.

Depending on the economic conditions the general occupational predictions are fewer jobs for higher number of people, with employment figures in general expected to remain at what has been considered rather high rates—6% or more. Some forecasters predict a shorter work week and possibly earlier retirement, as were imposed to combat the "great" depression.

Athough the preceding statements may sound gloomy, there are a number of factors that promise greater opportunities for the well trained deaf person at the job entry level.

Affirmative action and the Rehabilitation Act of 1973 require employment of minority and handicapped persons. If enforcement of these laws are carried out, the occupational opportunities of the deaf person will be greatly enhanced. These laws, however, do not necessarily deal with job promotion that may be a considerable factor in job satisfaction.

Larger employers are recognizing the "fringe" job benefits related to personal fulfillment on the job is necessary for all employees. Promotional opoprtunities may be closely related to job satisfaction and influence job stability.

Substantial factors effecting job opportunities is the general public attitude toward deafness and/or handicapped persons. Although we've not yet, and may never tear down discrimination, ignorance, hostility and ambulance of society toward handicapped persons, there is definitely a change! As deaf leadership demonstrates its concerns and ability with society, a greater acceptance will be experienced.

Personally, I've noted a substantial increase (during the past couple of years) in the number of persons at the University of Tennessee who are either majoring in the field or taking some courses related to deafness. There are considerable numbers of students in classes who are majoring in other areas of education as well as those from other colleges, especially in manual communication courses. This will ultimately have a positive effect on the occupational opportunities for deaf persons. The promotion of sign language classes and exposure of the public to signs on television and motion pictures increase awareness.

Educational programs must emphasize activities geared toward developing concepts for applying knowledge rather than facts alone. Arbitrary decisions on "training deaf people CAN do" must be replaced with long range forecast at future jobs and specialized techniques necessary for training the deaf person. The deaf child must participate in planning.

Some reference was made earlier to the "well trained" vocational-technical deaf graduate. The proliferation of varying programs for deaf persons, and lack of adequate communication facilities on the part of staff of the programs may lead to a wide diversity of quality in vocational technical training. Undoubtedly the deaf person will need a greater discretion in choosing a program tailored to his individual needs.

Since many persons in the audience are educators, and may tend to look at the occpational outlook as relatively unrelated to the classroom, may I strongly urge you to pursue greater familiarity with career education. The amount of information necessary to planning a career in tomorrow's labor market is volumous. Basic to the occupational outlook and choice of a vocational-technical training area, is a broad personal experience and a positive self concept on the part of the deaf individual. Despite technical skill training the occupation outlook is greatly enhanced for the mature individual with personal insights and the ability to relate to others. These personal qualities are necessary attributes for any occupation, be it unskilled, semi-skilled or at the highest rung of the professional ladder.

In summary, the occupational outlook for the deaf person depends upon such uncontrollable factors as socio-economic trends in the world. Preparation of the deaf youngster to meet changes with adequate educational (including vocational) training will effect the deaf persons opportunity.

BIBLIOGRAPHY

Bowe, Frank, and Roy G. Parks. "Preliminary Study and Proposed Regional Vocational School for the Deaf", *American Annals of the Deaf*, September, 1970, Vol. 115, No. 5, pages 537–539.

Jensema, Carl, Ph.D. "*A Deaf Adult Speaks Out*. A Note on the Educational Achievement of ODAS Members", The Volta Review, Volume 77, No. 2, February, 1975, The Alexander Graham Bell Association for the Deaf, pps. 135–7.

Studies in Achievement Testing, Hearing Impaired Students, United States: Spring 1971, Series D, No. 11, Annual Survey of Hearing Impaired Children and Youth, Office of Demographic Studies, Gallaudet College, Washington, D.C.

Lowell, Edgar L., Ph.D., "The New Economics and the Deaf", *American Annals of the Deaf*, October 1971, Vol. 116, No. 5, pp. 469–475.

Vernon, McCay. "An Era of Exploration"; *American Annals of the Deaf*, March 1970, Vol. 115, No. 2, pp. 55–56.

THE ROLE OF THE UNIVERSITY IN EDUCATION OF DEAF STUDENTS IN THE 1970's

Ray L. Jones, Ed. D., Director, Leadership and Training Program,
California State University at Northridge, Northridge, Calif.

I regard this topic as having top priority in the field of deafness today. The extent to which universities recognize and accept their role in the education of the deaf is crucial not only in guaranteeing competitive professional employment for deaf persons, but in providing for the field of deafness the deaf leaders who will be needed in the years ahead.

Before getting into my assigned topic, I want to put into perspective some of the significant developments which have contributed to the present status of higher education for all handicapped students.

Changes in society's attitude towards handicapped individuals

Frampton and Gall (1955) have documented society's attitude towards handicapped individuals as progressing through three distinct stages: First was a period in which they were persecuted, put away, neglected and mistreated. Second, a period in which they were protected and pitied, regarded somewhat as non-persons or as individuals who were less than whole. As such, it was necessary that non-handicapped persons serve as their "guardians." The third period encompasses the movement to more fully accept handicapped individuals and to integrate them into society to the greatest extent possible. To the above I would add a fourth period which we are now experiencing. In the current period, handicapped individuals are organizing for political action and are demanding equal treatment under the law. Although professionals in the field are deeply concerned at the rising militancy among handicapped groups, they are also impressed with the action resulting from that militancy: Architectural barriers are being removed in government and public buildings across the nation; transportation systems are being rebuilt in order to serve handicapped citizens, telephone companies are facing class-action suits to make their services available to deaf citizens at the same cost as for regular telephone users; and the groundwork is being laid through legislation and court cases (if necessary) to guarantee for the handicapped individual access to quality education at all levels, from elementary schools through universities.

Trends in financing education of handicapped students

In every state there has been developed an extensive network of public tax-supported schools which are open to qualified students beginning at kindergarten and continuing through graduate study. States have also recognized the special needs of handicapped students and usually provide some form of state reimbursement to local districts for the "excess costs" of educating handicapped students in elementary and secondary schools.

At the college level, however, responsibility for meeting the "excess costs" of educating handicapped students seems to have been left largely to the State Department of Rehabilitation.

Since the education of handicapped clients may extend over four to six years, the combination of those costs for all clients that could profit from higher education far exceeds the funds available to the Department of Rehabilitation. The result is the inevitable "rationing" of resources by accepting only the most promising clients (approximately one out of ten) to receive college support.

Many handicapped students who meet the normal admissions criteria established by a college or university are unable to attend simply because they have not been accepted as Department of Rehabilitation clients and their parents cannot afford to pay normal tuition, room and board, plus the cost of the support services required for them to function successfully in the college classroom.

California support for higher education of handicapped students

Significant changes are taking place in many states to assure the handicapped students equal access to public institutions of higher education.

The California system of higher education provides the following examples:

First: Of the 103 California community colleges, 93 were reported to be offering some degree of special service to handicapped students, 55 of these community colleges were reported to be serving 2,218 students with auditory and speech impairments in 1974. Funds for these services were coming from: (a) State reimbursement to community college districts for "excess costs" of serving handicapped students in the amount of $785 per student served; (b) Federal funds provides under the 10% Vocational Rehabilitation Act, "set-aside money" for handicapped students and; (c) Regular community college tax funds.

Second: In the California State College and University system more than three million dollars was appropriated last year for the removal of architectural barriers and in the past two years an office for handicapped students has been established on each of the 19 college or university campuses. At the present time, most of these offices are operating under funds provided from the regular college or university budget. However, system-wide program funding (probably an "excess cost" reimbursement) is anticipated.

A partial list of the services which are provided for handicapped students at these 19 campuses include:

1. Disabled Student Services Center.
2. Special registration assistance.
3. Pre-registration assistance.
4. Library study facility equipped for visually and physically disabled.
5. Orientation for new disabled students.
6. Assistance in securing tutors, readers, notetakers, and test takers.
7. Assistance in securing interpreters.
8. Referrals to appropriate on-campus or off-campus services.
9. Job placement counselor for disabled.
10. Adaptive P.E. classes for disabled.
11. Social center or activities program for disabled.
12. Emergency wheelchair repair and/or wheelchairs on loan.
13. Pamphlets or handbook outlining disabled services.
14. Accessibility map guides.
15. Braille map guides.

16. Active organization of disabled students.
17. Special Pilot Program for Disabled Students.
18. Special Deaf Center.
19. Home Economics classes for disabled.
20. Transportation on and off campus (wheelchair accessible) within 10 miles of campus.
21. Residence halls (at least minimally accessible on ground floor).

All campuses provide two or more of the above services with eight to ten offered on most campuses. A "Center on Deafness" operates on the campus of the California State University at Northridge with five other campuses reporting that they provide assistance to deaf students in obtaining interpreting services.

Legislation relating to higher education of the handicapped

The following recent legislation contains provisions which (if enforced) would greatly increase the number of handicapped students in higher education.

The Mathias Act which provides Federal reimbursements to states to assist in meeting the costs of educating handicapped students provides that in order to be eligible to receive these funds each state must by 1980 have developed a state plan providing for the education of all handicapped students between the ages of 3 and 21.

The 1973 Vocational Rehabilitation Act in Section 504 states that "no otherwise qualified individual . . . shall solely by reason of his handicap be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal Financial Assistant." If this provision is enforced, institutions which receive Federal funds, for teacher-training but which do not accept qualified handicapped students into these programs would stand to lose not only their training funds, but any other federal funds now coming to the University.

In the past year, Frank Laski, formerly with the National Center for the Law and the Handicapped has prepared position papers on the following topics:

a. "Postsecondary Education and Handicapped Students, Some Legal Considerations."

b. "Education Rights of Deaf-Blind Children."

Both papers thoroughly and clearly document that state support of institutions of higher education have a clear-cut mandate to serve qualified handicapped students.

Role of universities in higher education of the deaf in the 1970's

Gallaudet College has for many years rendered a great service by offering the only fully funded federal program for deaf students seeking a liberal arts education at the baccalaureate level. In recent years, the National Technical Institute for the Deaf has rendered a similar service for deaf students seeking vocational-technical training at the certificate or bachelor's level.

The national acceptance of these two programs, and their excellent public relations programs have perhaps obscured the fact that an increasing number of deaf students (particularly those receiving their elementary and secondary education in public schools) are successfully completing bachelor's and master's degree programs in regular colleges and universities.

The following studies document the significant number of regular colleges and universities which have served deaf students:

Crammatte (1968)—Deaf Persons in Professional Employment—identified ninety-five colleges and universities which had been attended by deaf persons participating in his study.

Jenne and Phillips (1968) in their survey of hearing colleges and universities found 653 deaf individuals who had attended 326 accredited institutions in 45 states.

At the California State University, Northridge, (CSUN) (formerly San Fernando Valley State College), a total of 153 deaf students have (during the past eleven years) successfully completed master's degree programs. While the total number of students in this sample is relatively small when compared with graduates from Gallaudet College or NTIC, it does provide a very interesting population for study for the following reasons: (a) All the students completed master's degree work in regular university classes with hearing students; (b) These 153 deaf students earning MA degrees and the 23 pursuing doctorates have done so at universities which have made no additional investments in "bricks and mortar" and with nominal support services of interpreting and note-taking; (c) Follow-up data including current employment status has been maintained on most students; and (d) the sample includes 23 deaf students who have gone on for further graduate study, with seven having completed doctoral degrees.

Summary

The majority of deaf students leaving the state residential schools or public high schools in the foreseeable future will probably continue to be best served in community colleges, technical vocational schools, Gallaudet College, NTID and other postsecondary institutions which can offer special vestibule or remedial programs for entering students.

However, the following points would seem to indicate that the number of deaf students who will be served in regular colleges and Universities will increase appreciably in the coming years:

1. The number of deaf students now attending regular colleges and universities across the nation is probably much higher than has been generally recognized.
2. Available studies comparing grades of deaf and hearing students at one university (Murphy 1975) indicate that deaf students are performing at about the same academic levels as hearing students.
3. Deaf students attending regular colleges and universities tend to come largely from public school programs. Since the number of deaf students being served in public school programs is increasing each year, the number of deaf students seeking admission to regular colleges and universities can also be expected to increase.
4. The success of deaf students enrolling in doctoral study at major universities throughout the country who have received only nominal support services (usually limited to interpreting) would indicate that given such nominal services the capable deaf student can succeed in doctoral study.
5. The placement record of the 153 deaf students who have completed master degrees at California State University at Northridge tends to support the following statements:

a. Given access to professional training as teachers of the deaf, deaf graduates are finding successful competitive employment in both day and residential schools.

b. Given access to professional training in the fields of administration and supervision, deaf graduates are finding competitive employment as supervisors and as administrators. Many hold key administrative positions in both rehabilitation and education programs serving the deaf and many hold positions which were not held previously by deaf persons.

c. There appears to be some exciting "fringe benefits" coming from programs in which hearing and deaf students are being trained in regular University courses. These include: (a) hearing students who have learned sign language as freshmen, who have served as interpreters and note-takers for deaf students and who have deaf classmates throughout their college training have a much deeper understanding and appreciation of deafness than hearing students in "segregated" classes. (b) Deaf students trained with hearing students tend to accept employment in positions not previously held by a deaf person and; (c) hearing students seem to be willing to support the employment of deaf students with whom they have trained.

6. Although the number of deaf students completing master's and doctoral level degrees has greatly increased in the past ten years, deaf professionals are still tragically under-represented in decision making roles in rehabilitation and educational programs serving the deaf (and in most other professional fields).

This is due in part to: (a) the discrimination which prevents otherwise qualified deaf students from entering such professional fields as teaching the deaf at the elementary level, legal and medical fields, etc., (b) Many who have recently completed graduate training have not had sufficient time to advance through the career ladder into a decision-making position and, (c) The rapid increase in the number of both rehabilitation and educational programs serving deaf individuals has resulted in an unprecedented demand for deaf professional employees. At times this has appeared to encourage the employment of deaf persons who have not followed the normal career ladder training and whose performance may, therefore, fall short of their employer's expectations.

Recommendations which would, (in my judgment), greatly increase the number of qualified deaf students in University professional programs would include:

1. Establishing the legal right of the qualified student to the services of an interpretor would remove a major hurdle which now discourages deaf students frou seeking admission to university training programs. The nominal cost of interpreting service would be more than offset by increased earnings the deaf person would earn upon completion of training. Stipends for trainees in these programs must be increased in order to permit the deaf student with a family to participate.

2. The enforcement of Section 504 of the 1973 Rehabilitation Act, which prohibits discrimination of handicapped individuals from participation in programs operating under Federal funds. This action would minimize discrimination which deaf students now face in applying for admission to professional training programs in such areas as; (a) teaching the deaf at the elementary level, (b) law school, (c) schools of business administration, (d) rehabilitation training programs, etc.

3. The number of programs operating to prepare professional personnel to serve the deaf in various areas should be increased and the number of deaf students served in these programs should be raised.

4. Conferences of college and university personnel working with handicapped students should include demonstrations of interpreting for one deaf student. This would not only demonstrate the effectiveness of classroom interpreting, but would give the persons giving the demonstration (an interpreter and a deaf student) an opportunity to answer questions from these college and university representatives.

Someone has said: If you feed a man, he will hunger again; if you clothe him, the clothes will wear out; if you heal him, and he returns to his old life, he may be diseased again—but educate a man and he can help himself!

THE ROLE OF TECHNICAL-VOCATIONAL TRAINING IN EDUCATION OF THE DEAF

Patrick Duggan, Counselor, Deaf Education Program, St. Paul
Technical Vocational Institute, St. Paul, Minn.

The purpose of this paper is to examine what services have been offered toward the education of deaf students in programs such as the St. Paul Technical Vocational Institute (T.V.I.). There are five basic functions provided in programs like T.V.I. (Lauritsen, 1975) which include; (1) Direct Service, (2) Consortium, (3) Short Term Workshops, (4) Consulting and (5) Internship.

DIRECT SERVICE

The two basic goals of direct service at The St. Paul Technical Vocational Institute are increasing choices in vocational training opportunities for deaf people and providing adequate support services to achieve this objective in an existing technical-vocational program.

The direct services provided at the St. Paul T.V.I. program are: (1) Preparatory programs; (2) counseling services; (3) job placement; (4) interpreting services; (5) note-taking; (6) tutoring; (7) auditory training and (8) career media.

Counseling services and job placement

There are a minimum of five major areas of counselor responsibility (Reddan and Duggan, 1973) in a technical vocational program. These responsibilities include vocational information, vocational-educational counseling, personal-social counseling, placement and follow-up services and general administrative responsibilities.

Interpreting services

Interpreters are the critical link in making possible integrated technical-vocational education for deaf students. Through the interpreter, deaf students have access to occupational information from teachers who are hired from industry for their job expertise and experience.

Notetaking, tutoring, and auditory training

Notetaking services are an on-going educational service for deaf students. Hearing students volunteer to be note-takers under guidance of the interpreters who in turn report back to preparatory instructors and counselors. Tutoring for deaf students is provided by preparatory instructors, regular faculty, interpreters and outstanding hearing students. Tutoring is provided for all deaf students as needed.

Auditory training is provided for students on a regular basis. All new students are automatically screened and complete a communication survey. All students requesting continuing auditory training receive this service.

Career media for the handicapped

The media program at T.V.I. develops and promotes vocational education media that will lead to adequate career selection, career training and job opportunities for handicapped people (Lauritsen, 1974). Media are developed to be suitable for teachers and counselors of handicapped children and adults, the families of handicapped children and adults and handicapped persons themselves. The program has developed validated career counseling packages entitled Vocational Exploration Packages (RCP's).

Consortium

St. Paul T.V.I. has expanded opportunities for deaf students outside of the parameters of the institute itself by joining other existing facilities and offering support services. Such programs include: (1) Other area vocational technical institutes; (2) junior colleges; (3) colleges; (4) universities; (5) rehabilitation centers; and (6) commercial "on-the-job" training stations. Service to these programs include the total range of all direct services offered in T.V.I. or any combination of those services that would most effectively contribute to maximum skill training of a deaf student.

A more recently developed consortium service established at the St. Paul T.V.I. is the National Interpreter Training Consortium (N.I.T.C.) to serve eleven (11) upper midwest states. Interpreter training will concentrate on joining and offering services to five facilities which are: (1) educational; (2) rehabilitation; (3) legal; (4) religious; and (5) medical. Those receiving service will be a hearing person entering the field of deaf education rehabilitation and related fields and persons in the field of deaf education and rehabilitation and related fields seeking up-grading (Lauritsen, 1974).

Short term workshops

Short term workshops developed as an expansion of the T.V.I. direct service and consortium programs. Areas of concern for the total deaf community included obtaining health care, interpreter service and counselors familiar with the vocational and personal needs of the deaf. To meet these community needs, many short term workshops have been provided toward health care and interpreter service at St. Paul T.V.I. Future workshops will be available in counseling.

These short term workshops offer a valuable service to both the discipline involved and the total deaf community. The value of any of these types of workshops holds vast potential as the initiating thrust toward greater total services.

Consulting

Federal, state and local agencies and groups are aware of the success of St. Paul T.V.I. and the deaf students. This success leads to greater credibility and subsequent requests from agencies and groups for consultation services from program staff. Consulting services are provided at all levels. However, the goals of consulting constantly focus on providing total packages of adequate services to the deaf community and in particular the services of post-secondary technical-vocational education.

Internship

Students training to work in the field of deaf education, rehabilitation, counseling or interpreting can profit from the information available in a program like T.V.I. The total experience of a postsecondary program for deaf students is made available to select interns representing established programs and services. Internships of up to ten weeks have been provided to representatives in administration, counseling, interpreting and teaching.

Summary

The St. Paul Technical Vocational Institute provides five basic services for deaf students which include: (1) direct service; (2) consortiums; (3) short term workshops; (4) consulting; and (5) internships. These services were developed to offer increased vocational training opportunities for deaf people and adequate support service to achieve this objective. Moreover, these services offered at and through T.V.I. have attempted to include and to meet the needs of the total deaf community.

BIBLIOGRAPHY

Lauritsen, Robert L., *Address to State Director's of Vocational-Technical Education*, Alexandria, Minnesota, 1975.

Lauritsen, Robert L., *Improved Vocational Technical and Academic Opportunities for Deaf Persons*, Final Project Report for Research and Demonstration, Grant No. 14–P–55196, 1974.

Reddan, R. and Duggan, P., *The Role of the Counselor in an Integrated Technical-Vocational Program for Deaf Students*, "Deafness Annual, Vol. 3, 1973, pp. 165–174.

THE PLANNING PROCESS AT THE NATIONAL TECHNICAL INSTITUTE FOR THE DEAF

Fred Wilson, Ph. D., Director, Office of Program Analysis, NTID,
Rochester, N.Y.

NTID's planning process is designed to provide a systematic approach to implement the mission of NTID and to assist all areas of NTID to contribute toward achieving the objectives set for NTID at is creation. Thus, the things that characterize NTID's planning are: (1) a set of specifications and operating principles setting out a mission; (2) a set of general needs applicable to the mission that characterize the population for which NTID was created; (3) a set of processes designed to satisfy the needs; (4) a framework for uniform use by all areas of NTID for developing planning statements; and (5) a standardized protocol for developing planning statements.

The resulting plan of work must be organized into a form that can be analyzed from several points of view. Such an organization provides vitality to the plan rather than leaving it a pretty document that is never referred to once it is completed. The outcome of the planning process must be useful to the individuals creating the plan. it should be meaningful to NTID's management, and it must be relatable to those external publics that view NTID's plans and progress. For example, NTID's host institution, the Rochester Institute of Technology (RIT), requires a planning statement quite different than educators of the deaf might desire. The federal government will desire the plan stated in terms quite different from the field of higher education. By building in the capability to view the plan and to report progress from several points of view, NTID can demonstrate accountability to those who are concerned with its operations.

The following sets out the conceptual approach to planning for NTID. The implications and implementation of this conceptual statement that lead toward the planning processes are related to the areas which will be presented subsequent to this paper.

Mission.—The starting point in the planning process is the clear determination of a statement of mission. For NTID, this was determined by Public Law 89–36 which authorized the establishment of a "coeducational residential facility to provide postsecondary technical training and education for deaf young people." NTID's fundamental mission is to enhance opportunities for deaf people in direct employment and thereby contribute to their long-term vocational, economic and social fulfillment.

General needs—With respect to its mission, NITD has identified *five* general needs of the population for which NTID was created to serve.

1. *Enhanced economic accommodation of deaf people.*—In 1973, available data suggested that wages among deaf persons lag 20–35 percent behind their hearing counterparts, that deaf workers are concentrated in semiskilled and unskilled occupations, that only 30 percent of professionally trained deaf people find and keep jobs commensurate with their educational backgrounds, and unemployment among deaf persons in some states runs as high as four times that of non-deaf people.

2. *Enhanced educational achievement of deaf people.*—The average deaf person lags behind his hearing peers in general achievement level by over five years.

3. *Improved communications skills of deaf people.*—One hundred percent of the deaf population has some disability in communication, since a profound loss in hearing ability affects adversely one of the primary channels of communication upon which human beings depend.

4. *Enhanced social and personal skills of deaf people.*—Deaf persons generally show levels of personal and social development that are inadequate for participation in a modern industrialized society.

5. *Enhanced effectiveness of teaching techniques used with deaf people.*—As a rule, teaching techniques used with the general population of deaf individuals have not yet prepared them well enough to go on independently with their education and training competitively with hearing persons.

Processes.—NTID's efforts are organized to help satisfy the general needs stated above. In particular, NTID was designed to fulfill three fundamental purposes set out in the agreement between RIT and the Department of Health, Education and Welfare (DHEW) that, in December of 1966, implemented the act establishing NTID. These three fundamental purposes and their related processes are: 1) to prepare deaf citizens for direct technical employment and full participation in community living (=CAREER DEVELOPMENT); 2) to influence professional personnel to serve the deaf nationally (=TRAINING); and 3) to influence the education, training and career placement of deaf citizens through applied research (=RESEARCH). Two additional processes are contained in the full set of eight responsibilities stated for NTID in the act that established NTID, the hearings surrounding the passage of the act, the agreement between DHEW and RIT for operating NTID, and the history of implementing NTID. Thus the total set of processes identified for NTID are Career Development, Research, Training, Information Dissemination, and Management.

Framework.—In carrying out its mission, NTID develops and provides programs and allocates resources to operate those programs. NTID's planning process is thus geared to analyze what the desired outcomes will be for any given period of time, what programs are required to produce these outcomes and what it will cost in terms of resources. The complex interaction of these outcomes, programs and resources constitutes the NTID instructional system.

Through planning, NTID identifies and develops several activities to achieve its purposes and carry out its responsibilities. These activities are grouped into a framework consisting of a hierarchical structure composed of six programs and several subprograms. The programs of this framework are Instruction, Research, Training, and Student Support; Instructional Support and Institutional Support. The first group of four programs are the primary programs, because they relate directly to satisfying the general needs of NTID's student clientele, and other deaf people. The second group of two programs basically provide services to the personnel of NTID to enable them to carry out the primary programs. Thus they are support programs.

These programs are directly relatable to the processes defined earlier. Career Development consists of the Instruction, Student Support and Instructional Support programs. Research and Training contain the programs only of the same name. Information Dissemination is accomplished through the Institutional Support Program as is the Management process.

At this point the framework can be seen to relate to the guidelines and mission for NTID—but as well, these programs for organizing activities on a common framework are identifiable with the National Center on Higher Education Management Systems (NCHEMS) framework. The programs are also identifiable with the goals of the host institution, RIT. Thus a convenient framework is provided for relating the activities of NTID to the various publics to which it is accountable. A matrix of NTID responsibilities, the above programs, the general needs of the deaf population NTID is to serve, and the functions of postsecondary technical education demonstrates that each cell of the matrix is appropriately filled with a corresponding NTID activity.

Protocol.—The viability of any plan rests with the identification the total professional staff have with the plan and the planning process. Thus NTID has chosen the route of developing its plan via a specification of broad objectives over the long range, as these are specified to NTID by those responsible for overseeing NTID; this is followed by intense efforts by the various organizational elements of NTID to develop planning statements relating to the broad guidelines for NTID and the specific way each element of NTID relates to these broad specifications. The results of the planning effort are assimilated into an aggregate plan. The aggregate plan is not a compendium of individual plans, but is a combination and blending of plans into a total plan for NTID.

At the level of plan creation, the vital link to a good plan, each professional must consider three fundamental questions: with respect to the guidance I have been given, (1) what needs to be achieved and by how much and when (the NEED statement); (2) How much of that need can be accomplished within the given time frame with the available resources (the OBJECTIVE statement); and (3) what are the activities necessary to achieve the objective (the ACTIVITY statement). When these three components are developed, they form a planning statement.

What distinguishes a viable plan from a plan that is cosmetic in appearance, but whose content never becomes reality? Accountability makes the distinction. Unless a plan can be monitored, it in fact is not a plan. NTID continues to develop several ways to monitor progress within its plan. Quarterly reports on the plan are routinely produced in which each operational area is called on to describe the milestones achieved toward accomplishment of its stated objectives. In the course of implementing a plan it occurs that certain routes must be forsaken and new ones added. The plan must be adaptable to changing needs or new understandings. This also characterizes NTID's approach.

Each area of the plan of work is coded and essential information stored in a planning data base. On a quarterly basis, report forms are prepared from retrievals made from the data base. Each area in which planning occurred is followed up on. Any activity reported that is not part of an existing planning statement is also checked on. The outcome is a quarterly review of the total progress of NTID toward its aggregate objectives.

Through its present planning process, NTID has achieved a consistent unified effort of all parts of the Institute to relate to its fundamental purpose. NTID has produced plans of work annually that are function-related rather than specific to an organizational structure. This has given NTID the capability to reform the way it allocates its people resources into an organizational structure without sacrificing the planning effort. Thus the plan enhances rather than retards acting on what is learned.

For the first time, NTID will attempt to tie budget directly to the program structure used for planning. This has occurred in planning for fiscal year 1977. Many technical problems remain to be solved in accounting for the use of resources with respect to the program planning structure. Nonetheless all of NTID has demonstrated that a program budget could be constructed. NTID's Office for Program Analysis is piloting the effort to test the program planning system that all divisions of NTID will use in FY77. The pilot basis for this office will begin in July, 1975.

The conceptual approach to planning that has been discussed in this paper—and implemented within NTID—absorbs an enormous effort from every professional in NTID. The payoff is, however, also demonstrably high in providing each staff member a clear chart of their contribution to the aggregate achievement of NTID, by providing NTID's managers with a clear picture of what is working and where the hiatuses are, and by establishing a data base for accounting to each of the external publics that review NTID's performance.

In the following papers the conceptual basis will be extended to see how the general can be made specific for particular needs of NTID.

PLANNING AND THE CAREER DEVELOPMENT MODEL

Milo E. Bishop, Ph. D., Assistant Dean; Jack Clarcq, Ph. D., Associate Dean, National Technical Institute for the Deaf, Rochester, N.Y.

NTID Purposes and Objectives

The National Technical Institute for the Deaf (NTID) is a special purpose institution charged by law to focus on a specified population. The *First Annual Report* (1967) defines NTID's objectives in meeting the special considerations called for by Public Law 89–36; the NTID Policies, Guidelines, and Application Procedures; Agreement for Establishment and Operation of the National Technical Institute for the Deaf between the Secretary of Health, Education, and Welfare and the Rocheter Institute of Technology; and the recommendations and report of the National Advisory Board on Establishment of a National Technical Institute for the Deaf, as follows:

1. To provide, for postsecondary deaf students, the opportunity to prepare for and to pursue semi-professional and professional level educational programs in science, technology and applied arts that lead to successful employment in business, education, government and industry.
2. To provide special support services, within an institution of higher learning, which facilitate and encourage deaf students to achieve a high degree of personal, social, and cultural development.
3. To encourage qualified deaf students to pursue graduate studies at RIT or elsewhere.
4. To conduct research into the occupational and the employment related aspects of deafness.
5. To develop and evaluate new imaginative instructional technology for application in the education of deaf students.
6. To conduct training programs, seminars, and short courses relating to deafness for RIT personnel, for graduate students preparing to work professionally with the deaf, and for other special groups.
7. To disseminate information regarding current NTID practices concerning curriculum, courses of study, special services, and research findings related to those offering programs for deaf children and to the RIT educational community.
8. To develop and modify the educational specifications, to design and construct the facilities, to procure the equipment, and to develop and maintain the staff necessary to meet the objectives of NTID.

In order to meet the challenge detailed in the history that led to the establishment of NTID and the subsequent definition of its purposes and goals, it was deemed necessary to develop a model for career development which would enable NTID to plan so as to maximize the impact of its organizational units upon identifying and accomplishing the total career development of deaf students.

This need and the situation surrounding it was succinctly incapsulated in an analogy made by Ms. Doe at the director's retreat (fall, 1974). She likened the complexities of NTID to a large mirrored ball rotating over the center of a dance floor with lights reflecting in every direction. She continued her analogy by stating that occasionally she had the urge to stop the ball, remove all the mirrors and line them up in a row such that they could be dealt with one at a time. Such a capability would be highly desirable providing that one could retain an awareness of the relationship among mirrors and could put them back together to ensure that the essence of the mirror ball had not been lost as a result of working with its components individually. The educational and, for that matter, the scientific literature as well is replete with studies which take a microscopic view of a complex issue without understanding that which is adjacent to the subject under inspection. NTID must not allow itself to fall into that trap.

History attests to the complexity of educating deaf individuals regardless of the educational or communication strategies employed. Experience has taught how easy it is for a science or reading class to turn into a speech class such that the subject content is never learned. Similarly, in one's zeal to ensure that academic content is mastered, personal, social, and/or communication skills have been slighted or perhaps even ignored. To give microscopic attention to any component without giving due attention to the other components of the student's development is to "short change" that student.

The career development model being described in this paper was designed to enable NTID to view career development (as defined by its mission) in its totality while subjecting its elements to microscopic inspection. The model consists of the following three dimensions: (1) the stage of career development, (2) the components of career development, and (3) the processes of career development. Each of these dimensions is discussed below.

Stages of Career Development

NTID's objectives regarding deaf students and their career development can be summarized by stating that: (1) every deaf person in America meeting the qualifications specified in the guidelines and agreement must receive equal opportunity to benefit from NTID and its programs; and (2) every deaf student entering NTID must leave the institute with the skills necessary to secure and maintain meaningful and appropriate employment while at the same time be prepared for personal, social and civic involvement. Success in meeting the second objective will ultimately be measured in terms of the degree to which students secure employment commensurate with their training and abilities and the degree to which they are able to move upwardly and laterally within their chosen career area.

In working towards these objectives NTID has identified for itself a series of milestones or experiences which a given student needs to go through in order to reach those objectives. In the present model, such experiences, or milestones, are encompassed within 11 separate stages. It is vital to understand that while these stages are individually identified by a number, they are not necesarily connected in series, nor are they discrete. The 11 stages along with a brief description of each are provided below.

Stage I.—Preadmissions—refers to the deaf person in his or her environment prior to acceptance into NTID.

Stage II.—Primary Admissions—refers to the process leading to formal acceptance of a student into NTID.

Stage III.—Validation of Admissions—refers to validating that the student is within the target population for which NTID was created, is interested in a technical education and can benefit from being at NTID.

Stage IV.—Selection of Technical Career Area—refers to student selection of one of the following areas of technical education at RIT: business, science, engineering, visual communication, social science.

Stage V.—Selection of Curriculum—refers to the student selecting a specific curriculum (major), e.g., social work, accounting, electrical engineering, etc.

Stage VI.—Selection of Level of Technical Program—refers to the student's selection of a technical education at the technical level, professional level, or the graduate level.

Stage VII.—Skill Development—refers to student movement through credited courses and/or units and well-defined complementary education activities.

Stage VIII.—Work Experience—refers to students involved in on or off-campus work which is part of their Career Development Plan, e.g., co-op, clinical work experiences, internships, etc.

Stage IX.—Skill Refinement—refers to the utilization of evaluative data of student work experience performance to refine the student's technical, personal/social/living, and communications competencies.

Stage X.—Job Entry—refers to activities involved in securing entry level jobs for students who have achieved the objective of their individual Career Development Plan.

Stage XI.—Career Enhancement—refers to the economic, vocational and social accommodation of graduates on and off the job.

Components of Career Development

I has been stated that at the Institute career development is the process of preparing people to "earn a living and live a life." In interpreting this concept, career development at NTID consists of three interrelated components. These components are: 1) technical skills; 2) personal, social, living skills; and 3) communication skills. These components are essentially self-explanatory. [illegible] more precise definition is not provided, in this paper, since the components are described in detail in other papers presented at the conference. Suffice it to say that NTID has taken the position that to neglect any one of the three components is to neglect the total career development needs of deaf students. It is of course important to recognize that there is a relationship between the above 11 stages of career development and its three components.

The Career Development Process is composed of three parts: (1) information gathering about students; (2) information dissemination to students; and (3) information integration by students. Simply put, the student must have a reasonable understanding of his or her interests, aptitudes, achievements, attitudes, the career areas programs, curricula, courses and units available at NTID and be able to match these variables in a meaningful fashion. Of course if the professional staff of NTID is to help the student accomplish this end, it is necessary that information be gathered about students through tests, interviews, observing performance, etc.

The Components and Processes of Career Development are independent of time. The stages of Career Development, however, cannot be discussed without considering their relationship to time. While the exact nature and extent of the relationship between each stage of Career Development and time is in the process of being more clearly specified by persons responsible for the content of each stage, it is sufficient for our purposes to present some general relationships. These relationships are graphically displayed in Figure 3, a Stage x Time matrix in which time is divided into 3 major parts Pre-NTID, NTID and Post NTID.

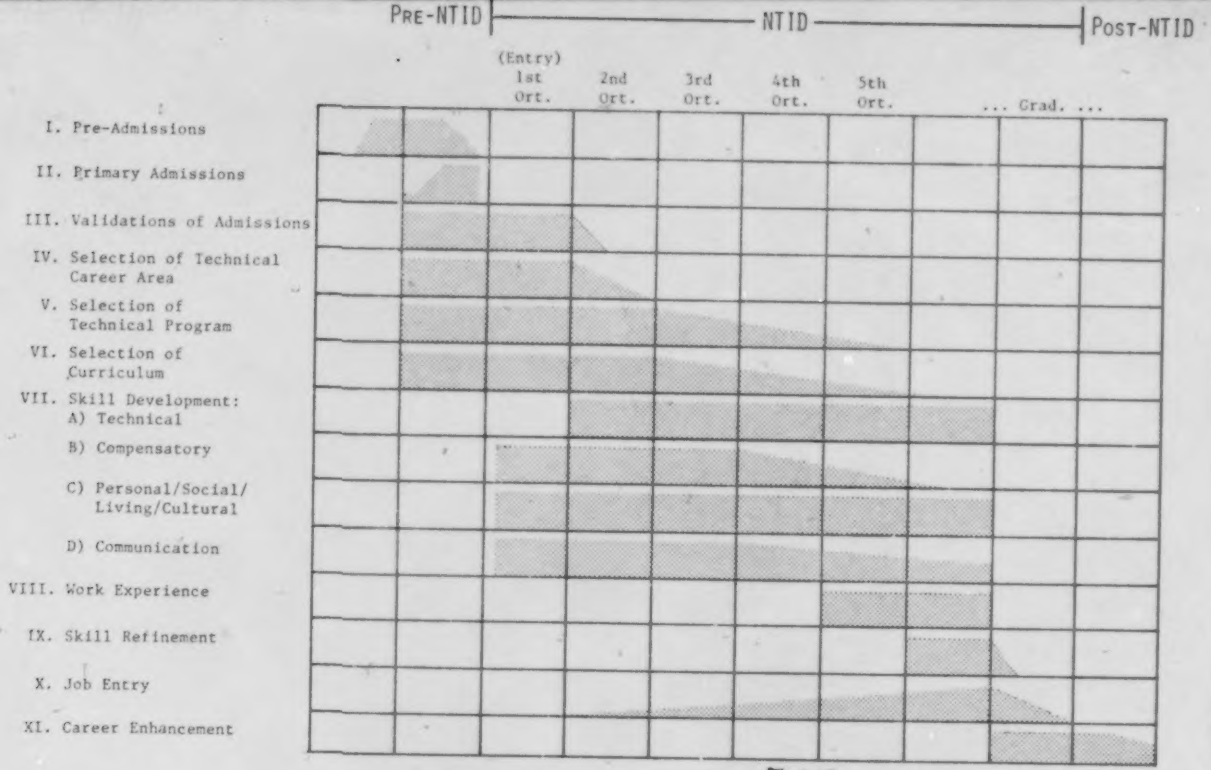

PRE-NTID
NTID
POST-NTID
(Entry) 1st Ort.
2nd Ort.
3rd Ort.
4th Ort.
5th Ort.
... Grad. ...
I. Pre-Admissions
II. Primary Admissions
III. Validations of Admissions
IV. Selection of Technical Career Area
V. Selection of Technical Program
VI. Selection of Curriculum
VII. Skill Development:
A) Technical
B) Compensatory
C) Personal/Social/Living/Cultural
D) Communication
VIII. Work Experience
IX. Skill Refinement
X. Job Entry
XI. Career Enhancement

FIGURE 1

The first part, Pre-NTID, is operationally defined as that time from birth until a person enters NTID as an admitted student. The NTID period extends from the time the student enters NTID until he or she graduates. The NTID portion, for purposes which will become clear later, has been divided into academic quarters starting with the entry quarter through graduation. The Post-NTID period begins after graduation and extends through retirement. The solid horizontal bars are intended to illustrate the extent of activity associated with a stage as a function of time. The wider the bar the greater the activity.

One can see from this figure that all of the activities associated with Pre-Admissions occur prior to entry into NTID. This is also true for Stage II, Primary Admissions. Stage III, Validation of Admissions, begins with the entry quarter and should complete itself by the end of that quarter. It is recognized, however, that the Validation of Admissions stage may not have been completed and may necessarily have to extend into the second quarter. Stage IV, the Selection of a Technical Career Area, can begin before a student ever enters NTID. This is also true of Stages V and VI.

Stage VII, Skill Development, has been subdivided into (a) Technical Skill Development, (b) Compensatory Skill Development, (c) Personal/Social/Living Skill Development, and (d) Communication Skill Development since they do not all start at the same time nor have the same requirements. Stage VIIa, Technical Skill Development, should not begin until after the end of the entry quarter and continues on through to graduation. Stages VIIb, c, and d, however, may begin immediately or shortly after entry into NTID and continue in a decreasing manner until the needed skill development has been completed.

Stage VIII, Work Experience, as presently designed, does not begin until after the end of the student's 4th quarter at NTID and then continues in a prescribed manner through to graduation. Stage IX, Skill Refinement, would generally not begin until the quarter following the work experience. Activities associated with Stage X, Job Entry, should begin shortly after the student enters NTID and continue in an increasing fashion until graduation, with the expectation that the need decreases such that by two quarters following the end of graduation, all students will have been placed. Stage XI, Career Enhancement, begins following graduation and continues on through at least until retirement. As stated above, we are in the process of more clearly specifying the nature and the extent of the activities associated with each of the stages for each of the time frames.

By identifying those stages that occur within a given time frame we have the capability of specifying those components of the total career development model which apply to any segment of time. If, for example, we were to construct the model for the time envelope defined as "entry into NTID", we can reduce the original 3x3x11 matrix to a smaller matrix by simply eliminating those stages which do not occur during that quarter.

In other words, one can think of this matrix as defining the scope and the dimensions of the program needed for newly entering students. As such, the model serves an important management function in that stewardships can be readily defined. For example, Dean Castle has given Drs. Clarcq and Bishop the overall stewardship for assisting him, to ensure that the total career development needs of students are appropriately considered during the entry quarter.

As we have already seen, total career development must consider each of the three components of the model. While it is understood that everyone must be concerned with each component, the stewardship for each component rests primarily with three of NTID's divisions. The technical component rests jointly with the Divisions of Technical Education Programs and Integrated Educational Programs. The communication component rests primarily with the Division of Communication Programs and the Personal/Social/Living component is mainly the stewardship of the Division of Integrated Educational Programs. This definition of stewardship can be graphically illustrated by dividing our three-dimensional matrix into an array of two-dimensional 3x5 matrices which display Process x Stage interactions separately for each of the three components.

To further simplify the model, one can segment each of the 3x5 matrices into 1x5 vector matrices which display the stages linearly as shown in Figure 5. At this point, the cells of the initial 3x3x11 matrix have been "lined up" such that they can be dealt with individually without losing perspective to the whole.

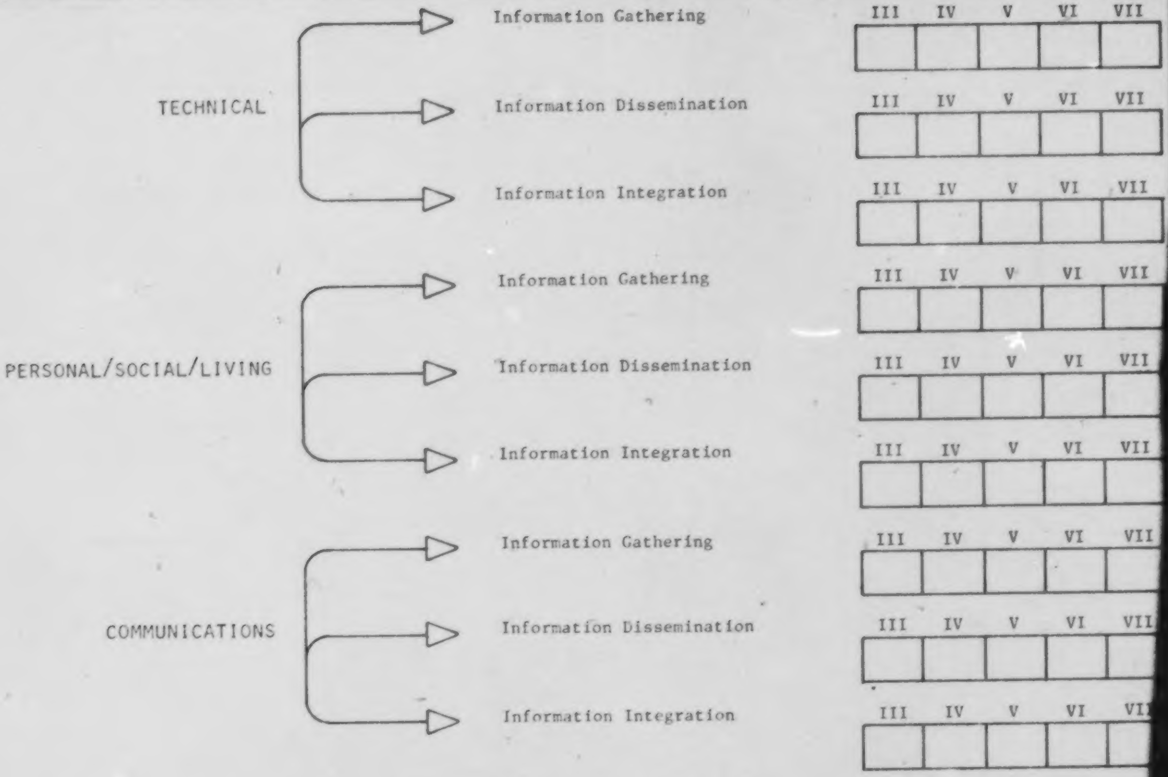

TECHNICAL
Information Gathering
III IV V VI VII
Information Dissemination
III IV V VI VII
Information Integration
III IV V VI VII
PERSONAL/SOCIAL/LIVING
Information Gathering
III IV V VI VII
Information Dissemination
III IV V VI VII
Information Integration
III IV V VI VII
COMMUNICATIONS
Information Gathering
III IV V VI VII
Information Dissemination
III IV V VI VII
Information Integration
III IV V VI VII

FIGURE 2

has been determined that such definition must address the following questions:

(1) What is needed; (2) Why is it needed; (3) How is the need to be met; (4) Who is to meet it; (5) When is it to be met; and (6) How is success to be measured? In turn each of these questions should be addressed to three distinct types of needs. The first type is student needs which are referred to as "Type I Needs." The second type (Type II) is staff needs relative to meeting students needs. The third type (Type III) includes administrative needs relative to meeting Type I and/or Type II.

While the major purposes of NTID's Career Development Model are to define that which constitutes career development and facilitates identification of what needs to be done, it does not specify who is responsible for doing it. That is a management decision. A strength of the model is that it is not based on the organizational structure of NTID. Rather it provides NTID with the conceptual framework upon which to hang everything it is presently doing in career development. As such, it will enable NTID to analyze how its resources are distributed, identify areas needing additional attention as well as areas needing less attention. Plans for fiscal years 76–81 call for the implementation of this model and its use as a tool in the overall planning process to help ensure that NTID focuses its resources so as to maximally impact upon the career development of each of its students.

PLANNING AND NTID'S CURRICULUM PROCESS MODEL

Jack R. Clarcq, Ph.D., Associate Dean for Technical Education,
National Technical Institute for the Deaf, Rochester, N.Y.

Introduction

This paper will deal with planning at NTID and will present NTID's Curriculum Process Model as an example of the process used to ensure that curricula are planned that meet the needs of both deaf students and the requirements of employers. The paper is organized to a) highlight reasons why the model was developed, b) present characteristics of a model and c) present and refine the major components of NTID's Curriculum Process Model. Then appropriate examples will be presented to illustrate how the CPM is operationalized at NTID.

Why a curriculum model?

The Curriculum Process Model was conceived out of a need for a systematic and orderly method for planning curricula at the National Technical Institute for the Deaf. The law and guidelines specifically charge NTID with the responsibility to train young deaf students in skills which lead to successful employment. Specifically, the Guidelines state that NTID's purpose is to provide ". . . for postsecondary technical training and education for persons who are deaf in order to prepare them for successful employment." [1] Further, the Guidelines, state ". . . that the program will continue to evolve, and take into account the probability of a changing clientele and the altered national demands and opportunities." [2]

---

[1] The National Technical Institute for the Deaf, "Policies, Guidelines and Application Procedures," United States Department of Health, Education, and Welfare, March, 1966, p. 1.

Given then the fact that the student population will change and further, that the needs and requirements of sources of employment will change NTID planners recognized the need to develop a process that can assist program planners in the design, development, implementation and evaluation of curricula that will be responsive to change. From this recognition came the Curriculum Process Model.

Models and planning

Models can be considered as planning tools that offer great opportunities for improving the decision-making process. They provide a "structure or set of operating rules necessary for systematic decision-making." [3] Models provide program planners with a way of organizing, a frame of reference and "descriptive, explanatory, and ultimately predictive guidelines for problem solving and decision-making." [4] The use of the word guidelines must be noted. Models will seldom provide solutions to problems or maximum choice of alternatives. However, "through improved description and explanation of situations and their inherent variables, prediction is also improved." [5] In summary, it can be said that models impose a rigor on planners through formulating of meaningful relationships of phenomena. This rigor tends to provide the impetus to avoid sloppy habits and "although it may improve the effectiveness of decision-making through systematization, should not be seen as an impediment to originality, simplicity, or reality in decision-making. The effect of rigorous and systematic model building, such as the scientific approach to problem solving, . . . once it becomes an integral part of the decision maker's handling of problems, facilitates greater creativity." [6]

With a charge to meet the needs of individual students and the needs and requirements of sources of employment and to be flexible in programs of instruction an attitude of innovation and originality is needed that should not be limited by academic precedent or existing models. As has previously been pointed out, it was with this in mind that the Curriculum Process Model was conceived.

NTID's curriculum process model

There are four fundamental assumptions underlying the Curriculum Process Model.

1. Deaf students are unique and as such NTID serves a distinctive clientele. The students are distinctive in terms of interests, motivation, experiences, aptitudes, achievements, etc.

2. The purpose of NTID is to prepare each student for successful job entry and mobility. This is mandated not only by Public Law 89-36 but by the Guidelines derived from the Public Law. It is essential, therefore, to consider the needs of the world of work in determining appropriate career areas for deaf workers.

3. The system by which one takes a member of this distinctive clientele and provides him or her with the skills necessary to obtain suc-

---

[2] *Ibid* , p. 2

[3] Bridges, Francis J., Olm, Kenneth W. and Barnhill, J. Alliso[illegible] "Management Decisions and Organizational Policy." Boston : Allyn and Bacon, Inc., 197[illegible] p. 121.

[4] *Ibid.*, p. 132.

[5] *Ibid.*, p. 132.

[6] *Ibid.*, p. 132.

cessful job placement is called a curriculum. The curriculum includes all of the educational experiences encountered by an NTID student.

4. There is constant feedback and interrelatedness between these three areas, client distinctiveness, job success, and curriculum. As such, flexibility is a key element in maintaining viable curricula.

NTID's Curriculum Process Model was derived from these four assumptions and is divided into six phases:

1. Create.
2. Need/justification.
3. Design.
4. Development.
5. Evaluation design.
6. Implementation.

Each phase will now be summarized.

Create phase

The purpose of the Create Phase is to document in general terms the idea for a new curriculum or curriculum change. This documentation need not be lengthly but rather a simple and general overview related to why a new curriculum should be offered or an existing curriculum modified. It provides program planners with base rationale.

Need/justification phase

The Need/Justification Phase serves two planning purposes. The first purpose is to establish that if a curriculum is offered, there is a need for skilled workers in the specified occupational area and second that there is a high probability that deaf workers can succeed in the occupational area. NTID has recently initiated a curriculum in Optical Finishing Technology. In planning this program it was determined that there is in fact a need on the part of sources of employment for optical technicians and that deaf people can indeed function in such a job.

Design phase

The Design Phase is intended to describe in more detail the curriculum being proposed. During this phase curriculum planners should identify the major personal and social, communication and technical skills and subskills necessary for a deaf person to function in a given occupational area. In other words, what performances, skills or competencies are required for successful job entry and mobility. In design of the Optical Finishing Technology Program a professional consultant skilled in optical finishing and representatives of the optical industry worked with NTID planners in identifying the major technical skills and subskills required on the job. It is also during the design phase that planners are provided with certain resource information, i.e., space, equipment and supplies, necessary to implement a curriculum.

Development phase

The Development Phase relates to fine-tuning the curriculum. It is during this phase that unique student characteristics are defined, behavioral objectives written, and instructional strategies and resources specified. Prerequisites for entry into the curriculum are identified and where appropriate, instructional materials are developed. At the present time, a training program for NTID faculty is being developed.

Entitled, "Course and Unit Development" this training package will provide faculty with skills necessary to organize courses and units of instruction in an effective and efficient fashion.

Evaluation design phase

It is during the Evaluation Design Phase that evaluation schemes are designed in terms of student performance. This relates to design of ways to measure student progress in meeting course objectives and implementation of a system to measure the performance of NTID graduates on-the-job. One example of a system being developed to provide planners with evaluation data is NTID's "Graduate Evaluation and Feedback System." This system has two primary objectives:

> To measure the degree to which the Institute is meeting its primary goal of preparing graduates for successful employment.
>
> To provide feedback to curriculum planners, regarding the accommodation of the Institute's graduates, which is vital to ensure that programs of study are kept in harmony with the needs of students and employers.

This evaluation program will collect data from graduates and employers at varying time intervals to determine how graduates are accommodating to the work world technically, personally, socially, and from a communication perspective. Information collected will relate to variables such as entry level salary and job functions, salary history, upward mobility patterns, general performance on the job, etc. This information will be compared with similar accommodation of non-handicapped people so as to determine if the history of unemployment, underemployment and lack of job satisfaction is being reversed. In the final analysis this will be the acid test of program effectiveness.

Implementation phase

It is during the Implementation Phase that curricula are offered (resources are obtained and students admitted) and curricula are evaluated in terms of effectiveness and efficiency.

Summary

In an era characterized by increasing competition for public funds it is hypothesized that questions will be raised with increasing frequency in terms of how well programs meet the needs of the population they are designed to serve. Program planners must respond to this questioning by careful and deliberate efforts in the areas of program planning and evaluation; including documentation. Development and evaluation of planning models can be a useful tool to program planners in meeting challenges of the future.

NEW CAREERS FOR DEAF PEOPLE: THE REHABILITATION PERSPECTIVE

Boyce Williams, LL. D., Director, Office of Deafness and Communicative Disorders, Department of Health, Education, and Welfare, Washington, D.C.

Forty years ago, most expectedly, the responsibilities for developing an appropriate manual training program for the male students of a very large residential school for the deaf fell in my lap. I, whose only manual accomplishment had been, a dozen years earlier, creating a shingle out of what began some months before as a book rack, was suddenly elevated to the ethereal realm of the vocational principals. Anyway, it was a lovely shingle.

Here was I, the neophyte, untutored, unschooled in the mystique of a profession that had a set of labels that did not at all fit the circumstances of its population, a heterogeneous collection of deaf youth in an elementary school setting.

Vocational education, industrial arts, manual training, on-the-job training, and other terminology have confronted and perplexed us all these years as we groped to justify, to rationalize, to make what we were doing and what had to be done conform to the labels of the day.

In recent years a new label has surfaced, career development, a concept that relieves us of the confusion under which we have labored these many years. The global connotation of the term whereby classroom and shop experiences relate to common objectives, complementing each other in the fulfillment of the school mission, provides for me comfortable dimensions. The role of the school shops as a fully responsible, fully contributing component in developing effective deaf youth is clear, unequivocal. Integrity of objectives is simplified. Readiness for whatever postsecondary trade, vocational, technical, or on-the-job training that may be indicated by the individuals native abilities and interests is enhanced. That dreadful characteristic of so much work experience of deaf people, specifically underemployment, seems much more manageable.

The very recent publication by the staff of the South Dakota School for the Deaf Inservice Program, GOALS, Career Education Curriculum Guide is an exciting ilustration of these thoughts. It focuses classroom experience on occupational awareness, providing a potent milieu for capitalizing maximally upon shop experiences. The cumulative effect upon the growing deaf child of continual exposure to this close association of academic and manual training must be tremendous. What far cry from the relatively sterile educational opportunities of yesteryear. What a superior springboard such educational experience brings to the advanced training opportunities in the vocational rehabilitation program.

Based on the superior breadth, depth, and resiliency such training instills, the state vocational rehabilitation agencies can mount individualized rehabilitation plans for deaf clients that reach into career areas that have not very often previously been considered seriously. The common job stereotypes that have characterized deaf employment will become much less common in the face of the many years of awareness, thinking, self-evaluation, identification and so on that each deaf child undergoes as he moves through this fertile career development process. The low aspirations that seem to be characteristic of so many brilliant deaf people whose serious language defects have been the source of years of frustration and defeat will be less prominent because this career development philosphy and process will generate for them the positive, healthy experiences that stimulate and elevate.

The most significant outcome of effective implementation of the new concepts in career development is the creation, extension, and strengthening of individual readiness to mount the ladder to the maximum occupational realization that is inherent in the vocational rehabilitation process. This ladder is identical in substances to the opportunities available to normally hearing people, opportunities that few deaf persons have shared because of their lack of readiness.

The improved readiness may be manifested in many individuals through their confidence, perceptiveness, sophistication, knowledge, focus, self-image, discipline, all characteristics that are apt to be nurtured in the favorable learning climate of career development techniques. These deaf persons will not be pushed into premature career selection decisions nor will their job expectancies be circumscribed by the limited training offerings of their schools. Their much better learning experiences under the emerging career development philosophy will qualify increasing numbers of them for more and better vocational training in the finest technical-vocational institutes and other training resources when they are sufficiently mature physically, mentally, and emotionally to make intelligent occupational choices.

When we speak of new careers for deaf persons, we do not have in mind the unusual, the unique, the glamorous jobs. We mean rather that more deaf persons than ever, having benefited from progressive educational experience such as the career development that we have examined briefly, will qualified to choose an appropriate occupational goal, succeed in the necessary training for it, enter upon and advance it. The state vocational rehabilitation agencies stand ready to lend all possible assistance in the job selection, training, and placement goals, plus all other services that may be necessary to achieve the job objective and maintain it.

PERSONAL LIVING SKILLS FOR HEARING IMPAIRED ADULTS

Nancy L. Mosher, Southwest Center for the Hearing Impaired,
San Antonio, Tex.

Historically, the primary goal of educational systems has been to make people literate, that is, able to read. Education for the deaf in this sense has not been very successful. The overall population, likewise, has a depressed average reading level. Perhaps it is time to look at "literacy" and re-define the term. Adult education programs throughout the country have initiated research to determine more meaningful programs for adults. The University of Texas has been developing a functional literacy model. Functional literacy has been defined as the acquisition of the skills necessary for independent living. The educational phase of the program at the Southwest Center for the Hearing Impaired (SCHI) has developed a program to help young deaf adults achieve functional literacy. The level of functional independence of each client is dependent on several factors but most important of these is the individual's own motivation.

POPULATION

A brief description of the population served at the Southwest Center for the Hearing Impaired (SCHI) will be given as an introduction. Table 1 shows that in the sixteen months since the inception of the program serving hearing impaired young adults at the Methodist Mission Home, forty-eight (48) clients have been served and seven (7) clients have been terminated. This is an attrition rate of 6.8%. Table 1 delineates the reasons for termination: four (4) withdrew at their own discretion, two (2) were taken home by their families and one (1) was dismissed from the program.

TABLE 1.—*SCHI population*

Current	41
Terminated	7
Total	48
Clients terminated:	
Self	4
Family	2
Dismissed	1

The following information may relate to the lack of communication skills evidenced by most clients at SCHI. Without attempting to be judgemental as to the quality of the family situations, certain quantitative information is available. Table 2 shows that 66 percent of the clients at SCHI come from broken homes and 29 percent of the population come from Spanish-speaking homes. None of the forty-one (41) clients now at the Center have deaf parents and only 14 percent (six clients) have hearing impaired siblings. Current literature (Brill, 1970) emphasizes the superior intelligence quotients and social maturity of deaf children of deaf parents. The type of client referred to SCHI seems to lend credibility to this theory.

TABLE 2.—*Family situations*

	Percent
Broken homes	66
Spanish-speaking	29
Hearing impaired:	
Parents	0
Siblings	14

The educational background of the clients at SCHI is sketchy. Clients have attended day and residential schools for the deaf, day schools for special education, regular classes and residential schools for the mentally retarded. Several clients have attended school for more than ten (10) years while others have never had any educational opportunities. In most cases, the educational experiences have not prepared the clients to meet life's challenges, that is, made them functional literate. In addition to this failure of the educational system, the entire concept of school has been a discouraging, self-defeating experience for most clients.

The family situations, lack of educational effectiveness, and related inferior communication skills are contributing factors to making the clients' hearing disability a handicap. A handicap is defined as a functional manifestation of a disability. (Williams, 1973)

The population currently at SCHI includues twenty-three (23) males and eighteen (18) females. The average length of attendance to date is 10.2 months with a range of 1 week to 16 months. Table 3 shows that the ages of the clients span a range from 17.9 to 43.3 years with a mean age of 22.6. The majority of the clients are young adults. Additionally, several older persons lacking communication skills, education and work experience have been admitted to the program.

TABLE 3.—*Client Age*

Mean	22.6
Range	17.9 to 43.3

It is with caution that I relate the following information concerning multiple disabilities. No formal I.Q. or achievement testing has been done at SCHI, so all of the information has been derived from previous evaluations. Forty-six percent (46%) of the SCHI population may technically be labeled multiply disabled. This percentage includes, however, only legal blindness, cerebral palsy and definitive scores indicating mental retardation on non-verbal I.Q. tests. The percentage would be much higher if emotional and behavioral problems were included. Rodda (1974) describes a variety of behavioral disorders found in deaf rehabilitation clients, many of which are evident in the SCHI population. These, along with developmental behavioral norms reveal additional deficiencies in SCHI clients with are not included in the above statistics.

The diversity of the ages as well as the multiple disabilities make a large percentage of the clients at SCHI multiply handicapped. The programs designed to make them functionally literate must necessarily be individualized.

TABLE 4.—*Management Model*

Sequenced Learning Objects: Diagnosis: Prescription: Evaluation: and Record Keeping.

ADULT PERFORMANCE LEVEL (APL) PROGRAM DEVELOPMENT

Before discussing individual client programs, the overall development of an adult personal living skills curriculum aimed at development of functional literacy will be described. Table 4 shows the management model used for needs assessment and follow-through. Sequenced Learning Objects include the lists of adult living skills in developmental order. For example, you need to know the values of $1, $5, and $10 before learning about interest rates on loans. Or you need to know how to add before you can do long multiplication. Diagnosis refers to identifying individual needs. This phase may include pre-testing and formulation of a plan of action toward the terminal behavior desired. Prescription includes individual and small group instruction on the identified need. Evaluation is to assess the progress. Let me stress progress more than a pass or failure to achieve. Record Keeping includes skills, dates, test scores and comments. For our purposes at SCHI, percentages or grades are not used. Each student's progress is recorded, explained to him and a joint decision is made as to whether he is ready to attack a new skill or needs to return to the Prescription and Evaluation portions of the current skill.

TABLE 5.--ADAPTED APL LITERACY MODEL

	Consumer education	Occupational knowledge	Government and law	Community resources	Health
Reading					
Writing					
Speaking					
Signing expressive					
Signing receptive					
Listening					
Computation					
Problem solving					
Interpersonal relations					

The management model, seen in Table 4, is used to specify independent living skills under each of the horizontal areas in Table 5. For example, Consumer Education should include Grocery Buying, Apartment Buying, Auto Buying, Checking, Loans, Budgeting, Insurance and others. Sequenced Learning Objects are defined for each item listed under Consumer Education. The curriculum at SCHI has evolved through the use of this Adapted Adult Performance Level Literacy Model (University of Texas, 1975). Since functional literacy is our goal, the 3 R's *R*eading, W*r*iting, and A*r*ithmetic are not separate classes. Furth writes that the reason teachers must worry about motivation is that we deal with non-meaningful intellectual activities rather than activities. He stresses the need for development of thinking skills. (Furth, 1971) The 3 R's alone are not vital to independent living, although in context they are essential! It is much more important to know the meaning of S-T-O-P or D-A-N-G-E-R than to be able to recite "The Raven" by Poe. Therefore, the vertical column in Table 5 designates the areas which are included in the personal living skills classes. Let me use a Consumer Education class on Savings Accounts for an example. Reading includes the terminology such as deposit and withdrawals. Writing is necessary to fill in the bank forms. Speaking, Signing and Listening are involved in the class, and should expand the person's communicative abilities in a very personally meaningful situation. Computation, using basic addition and subtraction, also become more meaningful when needed to check calculations in a personal savings account. Problem Solving will involve situations like a deposit slip written incorrectly or a monthly statement that seems inaccurate. Responses to varied situations are discussed and may involve relating appropriately to bank employees which involves interpersonal relations.

SCHI EDUCATIONAL PROGRAM

The educational program at SCHI has three major facets: GED, Language-Communication and Personal Living Skills.

The GED program provides the opportunity for some students to work toward attainment of a high school equivalency. Standardized materials are supplemented with teacher made materials when necessary.

Communication or lack of it seems to be the greatest handicap of the majority of the clients at SCHI. Language Samples, oral, written and signed, are obtained from each client upon introduction to the program. Periodically, samples are re-taken. Informal assessment of the type and quantity of vocabulary as well as identification of co-occurring and restricted structures (Muma, 1973) are used to determine how to intervene with each client's language. All classroom instruction uses total communication. Generally English structures are used but reinforced with Ameslan when necessary. The structure and vocabulary, of course, vary with individual clients. Language classes are all concept based with structural development secondary to increased concepts and communication. Language classes often center on job-related skills.

Adult personal living skills, in addition to communication expansion, are the focus for most clients at SCHI. The adult personal living skills portion of the curriculum includes classes such as current events, sex education, defensive driving, driver education, job application and interviewing, budgeting, insurance and measurement. As presented earlier in the curriculum development section, most skills are developed sequentially in behavioral objective form. Each client progresses through the sequence at his own pace to whatever level is possible for that individual. Pre-tests and post-tests are given. If a student does well on an initial assessment pre-test, then he is tested on the next step and so on until his need is determined. Thus it is possible to place out of many classes on the initial assessment. If the skill needs to be strengthened or taught, shown by a low score on the pre-test, the client will be post-tested at a later date. Teacher and client look at the progress, from 20x/20 to 5x/20, and discuss whether a new skill should be begun. Classes where progress has been satisfactory are counted as learned behaviors.

All of the initial assessment and learned behavior information, including the objectives and tests are kept in individual client folders and are open to client inspection at any time. Students are periodically given written information as to their progress through the total program. Individual charts, as well as a large wall chart, identify classes complete and classes to be taken. Monthly reports are written for each client's sponsor, parents and counselor. These provide the opportunity for monthly checks on progress or lack of it. Retention tests are given every three (3) months. These provide information which may alter the client's plan, the teacher's class, or both.

TABLE 6.—LEARNED BEHAVIOR

Group	Mean classes	Range	Mean months	Classes per month	Subjects
I	28.9	23-35	14.5	2	
II	17.2	14-20	11.5	1.5	1
III	10.8	10-12	8.6	1.25	
IV	3.9	0- 8	6.7	.58	8

Table 6 shows the data collected on learned behaviors, that is, personal living skills classes. Keep in mind that communication and GED classes, as well as part-time employment are related but not taken into account statistically. When computing the mean number of classes completed, the population of forty-one (41) clients was easily separated into four (4) groups. Group I attained a mean number of classes completed of 28.9 with a range of 23–35. (One client in Group I is working on GED.) Group II demonstrated a mean number of classes completed of 17.2 with a range of 14–20. (Two clients in Group

II are enrolled in GED classes and both have part-time jobs.) Group III averaged 10.8 classes completed with a range of 10–12 and Group IV averaged 3.9 classes completed with a range of 0–8. As would be expected the mean number of months at SCHI corresponded positively with the mean number of classes completed. Group I, achieving 28.9 classes had been at SCHI an average of 14.5 months. Group II, with 17.2 mean classes complete had been at SCHI 11.5 months. Group III, with 10.8 mean classes, had averaged 8.6 months while Group IV at 3.9 mean classes had averaged 6.7 months. If the correlation between number of classes completed and the average months of attendance was linear, the same number of classes would be completed per month by all Groups. This was not shown by the data. Rather the number of classes completed per month decreased from 2 for Group I, 1.5 for Group II, 1.25 for Group III to .58 for Group IV.

TABLE 7.—INITIAL ASSESSMENT

Group	Subjects	Mean	Range
A	14	24.2	19–37
B	27	7.3	0–17

Initial assessment data were tabulated and are seen in Table 7. On the initial assessment, clients were easily separated into two (2) groups, labeled A and B. Group A contained 14 clients with a mean number of classes initially passed of 24.2 and a range of 19–37 classes initially passed. Group B, consisting of 27 clients, initially passed an average of 7.3 classes with a range of 0–17. The initial assessment groups A and B, A being the more advanced group were then compared with the learned behavior Groupings I, II, III and IV. Recall that Group I had completed the greatest number of classes.

TABLE 8.—CLIENT PROGRESS

Group	Learned behavior			
	I	II	III	IV
Initial assessment:				
A	7	7	0	0
B	1	3	9	14

Table 8 shows client progress as initial assessment is related to learned behavior. Group A, which passed a mean of 24.2 classes on the initial assessment related positively with Group I and II who exhibited 28.9 and 17.2 classes completed. Seven clients were seen in category A I and A II. Note that no one who was designated as a member of Group A by initial assessment is performing in Group III or IV. Group B, who passed a mean of 7.3 classes on the initial assessment can be positively correlated with Group III, who demonstrated a mean learned behavior of 10.8, and with Group IV who demonstrated a mean learned behavior of 3.9. The number of clients in Group B III was 9 and in Group B IV was 14. This data followed a predictable pattern. But of special interest were the clients in Group B I and B II, 1 and 3 clients respectively. These clients initially passed few classes but have exhibited large strides in learned behaviors.

DISCUSSION

Table 6 showed the mean learned behaviors, the number of months in attendance and the number of classes passed per month. Recall that Group I passed 2 classes per month and Group II passed 1.5 classes per month. These two groups seem to be functioning similarly. Group II may have a slightly slower rate of educational progress due to the fact that 80 percent of these clients are employed compared with 63 percent of Group I. Also one student in Group II had never attended school prior to attending SCHI.

Group III, who learned at a rate of 1.25 classes per month contained five (5) clients who had been labeled mentally retarded and one (1) client who had been labeled aphasic. This means that 67 percent of Group III can be considered "multiply-handicapped". Additionally 67 percent of Group III was employed. Considering all this data, it seems possible that prior inaccurate assessment of multiply handicapping conditions may have occurred.

Group IV, who acquired learned behaviors most slowly, at a rate of .58 per month, consisted of a population including four (4) mentally retarded clients, three (3) clients with no prior education, two (2) legally blind clients, and one (1) aphasic client. This made 71 percent of Group IV "multiply-handicapped". Group IV either did not learn easily or the classes were not geared to meet their needs. Even though educational progress was minimal, 57 percent of Group IV clients are functioning in part-time employment situations.

Groups I, II and III seem to be able to learn these functional personal living skills with only minimum differences in rate. Group IV may need a more specialized program.

The relationship between initial assessment Groups A and B and learned behavior Groups I, II, III and IV indicated that initial assessment may be an effective indicator of potential progress. Generally the correlation was positive between initial assessment and learned behaviors. Fourteen (14) clients from Group A are found in Group I and II while twenty-one (21) clients in Group B are found in Group III and IV. Four (4) students however were initially assessed in Group B and have progressed to Group I and II. These clients were all from Spanish-speaking homes and three of the four had only minimal educational opportunities. These four clients remind us that although the initial assessment may be an indicator of progress, it, like IQ, scores, grade placement or teacher comments can be negatively biasing.

IMPLICATIONS

Further development of adult personal living skills at a lower level so that progress may be identified by clients and staff at smaller increments may be indicated by the mean classes per month shown by Group IV. This would serve two purposes. First progress could be recorded more frequently. Second and most important, these small improvements should encourage clients to develop better motivation and feelings of self-worth.

Initial assessments may be a useful way to predict progress and assist in goal setting, but extreme caution must be used not to underestimate potential.

The percentage of students on the job has been mentioned but not statistically correlated. Further research should include types of jobs, skills required and eventually each client's full-time employment and level of independent living. These will serve as the indicators of the value of a functional literacy, adult personal living skills curriculum for the hearing impaired.

BIBLIOGRAPHY

Bowe, Frank, Jr. "The DA Interview: Dr. Boyce Williams—Foremost In Rehabilitation Of the Deaf". The Deaf American, May, 1973.

Brill, R. G. "The Superior IQ's of Deaf Children of Deaf Parents", Jrnl of Rehabilitation of the Deaf, 4, 1970, 45–53.

Furth, Hans G., PhD. "Education for Thinking". Jrnl of Rehabilitation of the Deaf, 5, 1971, 7–17.

Muma, John R., PhD "Language Assessment". Publication Pending.

Muma, John R., PhD "Language Intervention for Teachers and Clinicians", 1973. Publication Pending.

Nored, Arnold. APL Curriculum Development Project. University of Texas at Austin, April, 1975.

Rodda, Michael, PhD. "Behavioral Disorders in Deaf Clients". Jrnl of Rehabilitation of the Deaf, April, 1974, 1–13.

COMMUNITY EDUCATION AND THE CLASSROOM TEACHER

James Cox, Ph. D., Director, Community Education, Gallaudet College, Washington, D.C.

INTRODUCTION

This paper is designed to provide a rationale for the philosophical and practical aspects of community education as it relates to the Community School and classroom teachers. It is not designed to review the total ramifications of this relationship nor all of the necessary components involved, but rather to plant the seed for further inquiry or the rejuvenation of dormant thinking.

To provide a basis for this discussion, a brief overview of community education follows.

COMMUNITY EDUCATION

Community education is a concept that is receiving increased attention and emphasis from educators and community members throughout the United States. In a time when people are searching for ways to bridge the educational and social gap between the home, the school, and the community, the community education concept offers a common sense approach to eliminating or lessening the insulation and isolation that deaf people experience as they become a part of the mainstream of community life.

For the community education concept to develop, there must be an initiator and organizer. In that, the school is generally recognized as the most influential educational agency in a community. The school can serve as that agency which stimulates, initiates, and organizes the community education concept. When school systems accept and implement the concept of community education, it becomes a COM-

MUNITY SCHOOL. The Community School puts into operation the three major components of community education: EDUCATION—HUMAN SERVICES—COMMUNITY.

Education component

The school and related community agencies, groups and individuals attempt to provide life-long learning opportunities that are meaningful and relevant to children, youth, and adults in the school, the home, and the community.

Human services component

The school and other community agencies and groups attempt to make maximum use of all available resources in a community in a collaborative effort to provide meaningful and accessible services to all members of the community.

Community component

The school attempts to establish means whereby people can become better informed about the school and community. By being better informed, they can become more involved in determining their needs and desires while sharing in decision-making, planning, implementation, and fellowship while meeting their needs and wants.[1]

Rather than exploring the total concept of community education, the remainder of this paper will deal only with the education component and how it relates to the classroom teacher.

EDUCATION COMPONENT

People are educated by three forces. The HOME, the SCHOOL, and the COMMUNITY. If one accepts the philosophy of John Dewey that all experience is education, then educational experiences cannot be geared to the school alone. "The 2x4x6x9 concept of education—the idea that education fundamentally is something that is found within the two covers of the textbook, the four walls of the schoolhouse, the six hours of the school day, and the nine months of the school year, cannot continue to be practiced. We must go beyond that." [2]

Traditionally, students spend two and half times more time outside the classroom than in it. Education does not start at 8:30 in the morning and stop at 3:30 in the afternoon nor do people start learning at age 4 or 5 and stop learning at age 17 or 18. The deaf adult must have meaningful access to educational opportunities. He does not stop learning at age 17 or 18 nor does his desire to learn more. If he is to function at his full potential socially, culturally, and economically, opportunities for continued learning must be available to him so that he can obtain the degree of education, training, and experience that he needs and desires. Dr. Ernest Melbey noted educator and author once said, "The school that would educate all the children of all the people must educate all the people of all the children."

If "all experience is education," then education is a life long process that cannot be monitored and isolated to specific clients, places, or times. It occurs in the home, the school, and the community, and classroom teachers should become the basic architects for educational learning experiences.

---

[1] James C. Cox, "Community Education and Community Schools," (Washington, D.C.: Gallaudet College, Center for Continuing Education, 1974) pp. 1-4.

[2] Edward G. Olsen, The Educative Community," in ed. Dee Schofield, Community Schools and Classroom Teachers," (Eugene, Oregon: University of Oregon, 1975) p. 22.

Dr. Thomas Mayes, Dean, Center for Continuing Education at Gallaudet College once wrote that "All people, and especially handicapped people learn what they live. When deaf people are set apart, educated apart, treated differently, they will be apart and they will be different. People meet situations as they perceive them and attempt solutions as best they can in light of all their past experiences."[3]

Peter Ripley, Assistant Superintendent of the North Carolina School for the Deaf has given the symptom of school isolation and insulation from the community a name. He calls it the "Out-In-The World Syndrome." Ripley states that "when he gets out in the world" is a statement that is used repeatedly. When a professional, parent, or student makes that statement, he is "actually suggesting that the school, the home or the community is not a part of the real world; that the school, the home, and/or the community is actually an isolated entity which protects the individual from the realities of everyday life."[4] To an outside observer, one might think that the classroom and the community are two separate unrelated worlds.

Can the school become involved in the total learning environment? Can sound principles of teaching and learning be practiced where the methods ad resources used are not so traditional? Will school administrators provide flexibility in policy and support to allow full involvement and utilization of the total learning environment? These are but a few of the questions one should ask before stepping out of the traditional instructional mold.

Irwin and Russell[5] maintain that "using the community as the classroom has potential for . . .: improving instructional programs for the educationally disadvantaged, individualizing instruction, building positive self-concepts, providing opportunities for creative expression, increasing perceptual awareness, developing problem-solving skills, involving students in curriculum planning, fostering language and concept development, encouraging social sensitivity, and weaving all of these together into a relevant curriculum."

It is not suggested that classroom teachers are not currently practicing or striving for the above, for many are in their daily activities. What is being suggested, however, is that in general, classroom teachers are not making full use of the many valuable resources that can be found in the school and community whereby the student can use the subject content acquired in the classroom and interact with his school and community so that the learning experiences are more "real world." This type of action not only enriches his learning experiences, but enhances the opportunities for relationships with others outside his peer group and school setting, which for many deaf children comprise their whole world. If children are being prepared in the schools for later participation in the adult society, "they should not be viewed as citizens of the future, but rather as youngsters already participating as citizens in today's world."[6] They cannot be insulated and isolated from the "real world" one-fourth of their lives and then be expected to assume their rightful roles and responsibilities as adults when they reach the age of eighteen.

---

[3] Martha Irwin, Wilma Russell, "The Community is the Classroom," (Midland, Michigan: Pendell Publishing Co., 1971) p. XIII.

[4] Peter Ripley, The Out-In-The World Syndrome," (speech delivered at Community Education and the Deaf Community Conference in Washington, D.C., 1973).

[5] Irwin and Russell, 1971, p. 4.

[6] Ibid., p. 10.

Teachers have for years utilized field trips to enrich classroom instruction, but have in the main, used these field trips with the purpose of "icing on the cake" if you will.

Irwin and Russell offer several suggestions in their book, "The Community is the Classroom," that classroom teachers might find useful as they begin expanding and enriching educational experiences. They suggest that "Children read stories about life in the country, see a film or filmstrip, discuss rural occupations, and eventually they may visit a farm. Unfortunately, it is only at the end of the study that the child has some firsthand experience."[7] What they are suggesting is that rather than have the firsthand experience at the end, it could very well be at the beginning with the unit of instruction planned around the questions raised by the children using a problem-solving approach.

Rather than teaching history in the classroom, why not teach it in the local museum, if one is available and accessible? This would not only provide more resources for instruction, but would provide the student with a better understanding of his community and what is available while providing more deaf awareness on the part of the museum center. Of course a class of this type requires more flexible scheduling in the school, but it would seem that the "real world" experience would be worth the extra effort.

With the classroom serving as the "focal point" of instruction, the school and community provide immediate experiences that reinforce the classroom instruction. By seeing the school as a total school, the school custodian, cook, principal, etc. can serve as resources so that children see and understand what is involved in the total operation of the school. This would also initiate questions for further inquiries; such as: school funding, nutrition, etc. Likewise, a walk around the block with the thought of stimulating questions from the students may provide study units in power, architecture, automobiles, traffic patterns, ecology, community clean-ups, topography, and many other topic areas which the students might wish to explore formally and informally, individually and in groups.

Rather than talking about water pollution, find a suitable location where polluted water can be seen and the resultant effects it has on the environment. Rather than see a film or filmstrip on the proper care of animals, take them to a veterinarian. Rather than talk about the decision making process, involve the students in decision making in the classroom, the school, and the community.

The previously mentioned examples are only suggestive as the limit to the experiences that can be gained by both student, teacher, and community member are only limited to the creativeness of all concerned. As students interact with their environment, the classroom, the school, and the community each becomes interrelated learning laboratories. Let us not get the point where our students are so effectively isolated and insulated from the community that they become knowledge rich and experience poor. Seek out ways to provide richer experiences so that the community-at-large becomes more meaningful and accessible and surely the lives of deaf people and the community-at-large will certainly be more enriched.

---

[7] Ibid., p. 11.

IDEAS FOR USE OF COMMUNITY RESOURCES [8]

Who can teach in the community education program

Use college students to teach both adults and school children.

Use community college personnel in teaching.

Use senior citizens as teachers and classroom resource people.

Use senior citizens in history classes.

Children can teach adults (including senior citizens).

Students can teach each other or teach students in lower educational levels.

Elementary students can observe and converse with secondary students in music programs.

Give credit to high school students for tutoring or aiding in teaching.

Parents can teach their hobbies at home and at school.

Develop lesson plans for parents to teach their kids at home.

Get parents to run a summer art program.

Use business people in the schools.

A business or public agency could adopt a class for a year.

Contact recreation departments and ask them for help in arts and crafts.

Use other school staff members (such as cooks, janitors, secretaries) to teach and share information on their hobbies and interests.

Contract with the community's retired teachers to come back into the school on certain days.

Where community school classes can be taught—facilities

Use community members homes for classes, if at first they're afraid to come into the school.

Use all available school classrooms, gyms, shops, and other facilities.

Use other community buildings for classes (churches, public buildings).

Open the school library to the community.

For turned-off kids, send them into the community for half a day—make the community their classroom.

What is taught—curriculum

Organize a planning committee of students, parents, and teachers to plan curriculum.

Teach mini-courses. Teachers should get out of their special fields and teach something different.

Use elective periods for non-regular curriculum taught by community members.

Incorporate community service into the curriculum for high school students. Give them credits for community service work.

Emphasize on-the-job training.

Teach parents how to teach their children at home.

---

[8] Adopted from Dee Schofield and Skip Liebertz in ed. Dee Schofield "Community Schools and Classroom Teachers," A conference report, Eugene, Oregon: University of Oregon, 1975, pp. 13-17 and 49-50.

Teach parents how to be better parents.

Encourage children to develop a "community" within their classroom and see how close it comes to the "real" community. Try out democratic government in the classroom.

Community education activities

Establish parents' clubs in homes.

Families of different ethnic backgrounds can give programs on their cultures.

Mother's and Father's Day lunch/dinner can be prepared by students and served to parents.

Provide babysitting during parents' activities.

Start adult and pre-school library programs.

Have a parent or any adult spend the day attending classes with a student.

Have the student spend the day with an adult at work.

Start a junior high "Rent-a-Kid" program for community jobs. Have the kids apply and interview for jobs.

Hold community exhibits (like science fairs) and have community members act as judges.

Set up an informal drop-in center/coffee room for police and other social service people in the school.

Institute a cross-cultural exchange—a rural/metropolitan student exchange.

Require teachers to visit homes and community members.

Have classes visit senior citizens' homes and hospitals.

Start a foster grandparent program involving senior citizens from the community.

A PERSPECTIVE ON COMMUNITY EDUCATION PROGRAMS AT THE DELAWARE STATE SCHOOL FOR THE DEAF

Edward E. Corbett, M.A., Community Education Coordinator,
Margaret Sterk School for the Hearing Impaired, Newark, Del.

Community education, as it is being practiced at the Margaret S. Sterk School for the Hearing Impaired, is a process that involves the community in the education of the hearing impaired people from kindergarten to adulthood. The education here is used in the broad sense of implying not only basics in education, but recreation, health, citizenship, vocations, and avocations. This paper deals with Delaware's programs in community education and examines the components of community education. The components:

(1) Elementary and secondary programs (K to 12).
(2) Maximum use of school and community facilities.
(3) Programs for youth and children.
(4) Programs for adults.
(5) Delivery of community services.
(6) Community involvement.

Elementary and secondary programs (K to 12)

Community education can serve K–12 programs effectively. An old saying goes on like this, "The community is the best classroom there is," and schools can tap the community for its resources in its educational programming to meet the needs of hearing impaired students. Field trips can be enhanced when the community is aware of the schools' needs. Resource people in the community will be very happy to help the schools with the teaching process and will be more than willing to let schools use the community resources.

Maximum use of school and community facilities

The Sterk School is a community school in a sense. We open our school buildings to the community and they use our facilities for meetings, adult education programs, and recreational purposes. The community, in turn, lets us use their facilities for our needs. Remember, schools belong to the community and why should we operate our schools seven hours a day/five days a week/nine months out of a year? It is not economically feasible—so, open the schools to the community and when you do that, the community will be your biggest supporter when you want something done for your school. There is no such thing as "my school", "your school", etc., for schools are a part of the public domain.

Programs for youth and children

The community has many programs for children of all kinds. Duplication of services by schools for the deaf can be avoided when one checks the activity sheet provided for the children in the community and utilizes that activity.

Programs for adults

Adult education is one area that is urgently needed by the deaf. There are existing adult education or adult basic education programs in the community—all you have to do is to plug in a program for the adult deaf or provide them with an interpreting service. By doing so, you are effectively involving the deaf people in community affairs and vice versa.

Delivery of community services

The community has a number of services that can be best utilized by schools for the deaf. Know these services and make use of them. The key word here is "involvement" and by becoming involved you are venturing forth in a greater cooperative program and deaf children will ultimately benefit from the sharing of community services.

Community involvement

Mr. Roy K. Holcomb, Director of the Sterk School, has this to say: "No longer can the deaf be isolated from the community. No longer can the community be isolated from the deaf. Both the deaf and hearing can learn to live together, and community education provides us with the opportunity to bring this about. The time is now ripe for us to move full speed ahead into community education."

Once schools for the deaf involve the community in their educational programming, they will find the use of community resources (both human and physical) enhance the education of the hearing impaired for the community is the biggest classroom the deaf can find themselves in. Not only will it educate the deaf population but also the general public on deafness as well.

STUDENT PERSONNEL SERVICES FOR THE DEAF AT LEE COLLEGE

David Pimentel, Counselor Coordinator, Hearing Impaired
Project, Lee College, Baytown, Tex.

The Hearing Impaired Project at Lee College in Baytown, Texas provides postsecondary training to residents of the state of Texas as well as surrounding states. Lee College is organized to offer three major programs of study to suit the needs of its students. A student may pursue an Associate of Arts degree, an Associate of Applied Science degree or a Certificate. Lee College has an enrollment of 4,075 students with an average of 50 hearing impaired students. The college provides a curriculum which offers 30 vocational/technical majors from which to choose.

Lee College is fully accredited by the Southern Association of Colleges and Schools and gives credit for all courses offered to hearing impaired students.

PLANNING

The Hearing Impaired Project at Lee College was founded in September, 1969. The need for such a program to serve hearing impaired young adults was seen by many people in Texas. However, it was through the efforts of Mr. Ralph White, Program Specialist for the Hearing Impaired, Texas Rehabilitation Commission that a grant proposal was written and submitted to the Department of Health, Education and Welfare. Subsequent approval of the grant established the unique organizational structure of the program at Lee College. Stuckless (1973) believes, "A program for deaf students cannot operate independently unless the program and the institution are synonymous [p. 4]."

At Lee College, the Hearing Impaired Project is staffed and funded by the Texas Rehabilitation Commission. Lee College as the host facility makes available its entire staff and services to the students and staff of the project so that the goals for both are synonymous. Although the Hearing Impaired Project staff does not work for Lee College, their input for planning purposes is always sought when the hearing impaired program is affected. The attitude of the college administrators has always been one of full cooperation and interest in meeting the special needs of hearing impaired students.

ADMINISTRATION AND STAFFING

The Hearing Impaired Project has a full-time counselor with the appropriate qualifications necessary to handle administrative duties as well as being knowledgeable of the needs of postsecondary hearing impaired students. The counselor provides academic, vocational, and personal counseling to all students in the program. The interpreting staff consists of seven interpreters, one of whom is responsible for assigning interpreters to the classes in which they are needed. The personal-social adjustment program is carried out by a deaf staff member who is a certified teacher of the deaf. In addition to the above staff, part-time interpreters are utilized to cover night classes and overloads during the day.

A very vital part of the program for the hearing impaired is that of specializing instruction and instructional materials to meet the unique needs of students with communication deficiencies. Lee College, through a grant, is able to provide a full-time instructor who is deaf and fully qualified and experienced in this type of work. Although this instructor is not on the project staff, her work is completely synonymous with the goals and objectives of the project.

STUDENTS

Prospective students are recruited through several referral sources. The chief source is the Texas Rehabilitation Commission through its many counselors who are serving the hearing impaired as well as the Program Specialist for the hearings proposed. A second referral source is the Office of Education of the Deaf, they are in a position to refer students in the school systems to the program.

Admission requirements to the program are flexible due to the real need by many deaf young adults for vocational training in spite of their great academic deficiencies.

CURRICULUM

The core of the training program is the curriculum. Therefore, incoming students need a preparatory program designed to expese them to the types of training available to them at Lee College. This is accomplished during a summer program which allows new students to sample different vocational areas through "hands-on" type experience. During the job sampling, each instructor writes a general evaluation of each student regarding his observations of any potential by the student in that career area. These reports are used in counseling with the student at the end of the summer evaluation when the student decides what career to pursue. The students at this time will have several options from which to select. Once the selection has been made by the student, he will still be able to modify his training objectives with the help of proper guidance.

With the realization that some students are not capable of achieving in "academic" courses, a program of general education in basic math, reading, and language arts is made available to them in order to help meet their needs as adults in our society.

During the summer program, the students receive an orientation to the college just as most freshmen receive at most universities. In addition, the new students receive an orientation to the community and to independent living. There being no dormitories at Lee College, the students must live in off-campus housing.

Lee College, in cooperation with the project, has established a personal/social adjustment class designed to further the students' development toward personal and social maturity. It is recognized that social awareness as well as self-esteem are important facets to attain in order to better cope in a society which is predominately hearing.

In its efforts to meet the curriculum needs of the hearing impaired students, as stated previously, Lee College hired a deaf teacher of the deaf. It is this instructor's responsibility to:

(1) Create special programmed materials for each technical-vocational curriculum.

(2) Plan and supervise special remedial instruction.

(3) Assist technical-vocational instructors in the development of media.

(4) Create and direct a study lab with the equipment necessary for student self-advancement and review.

(5) Provide intensive tutoring for hearing impaired students.

Cooperative efforts between the project staff and this special faculty member enable the students to take full advantage of the training offered at this college.

SUPPORTIVE SERVICES

The heart of any program for hearing impaired students is the supportive services available to meet their special needs. The Hearing Impaired Project provides the following:

(*1*) *Special classes for hearing impaired students*

Lee College recognizes that the special needs of some students warrant special classes limited only to the hearing impaired. In this manner, instructors can devote their entire efforts in the class to meet the students' needs. Full college credit is awarded upon successful completion of these classes.

(*2*) *Interpreting*

A qualified interpreter in both expressive and reverse interpreting is provided for all students who require one.

(*3*) *Tutoring*

Tutoring services are available to all the students in the project. The staff of seven full-time interpreters have designated office hours during which they are available for tutoring students in the classes which they interpret. Interpreters are also available for student-teacher conferences when the student wants a consultation with the instructor.

(*4*) *Notetaking*

Arrangements are always made through the instructor for a hearing student in the class to take notes for the hearing impaired students. Carbon paper can be provided or the notes can be duplicated on a copy machine after class. Alternative methods which have been used are (*a*) recording lectures on tape and transcribing to notes later and (*b*) writing notes from the text. These two methods were used by interpreters.

(*5*) *Manual communication training*

Manual communication classes are made available to all students especially new students who do not have a manual communication background. Classes at three levels are offered in addition to technical sign classes to assist students in their particular field of study. These classes are optional since the project does not emphasize one method of communication over another.

(*6*) *Vocational counseling*

Vocational counseling is an ongoing process which is initially very closely tied to the job sampling program which all new students undergo upon arrival during the summer program.

(7) *Vocational placement*

Because the Hearing Impaired Project is part of the Texas Rehabilitation Commission, all resources available to the agency are used to help the students find suitable employment commensurate with their training. In most instances, the students return to their hometowns or to large metropolitan areas to seek employment and they are assisted by a rehabilitation counselor in that area. All the big metropolitan areas have a counselor working exclusively with the hearing impaired and the counselor can provide valuable assistance to the student.

(8) *Personal and social services*

Personal and social counseling is a service which most students require in their adjustment to independent living. It is in this type of counseling that the student is exposed to the many behaviors that will be required of him by our society. In addition to counseling, the students receive direct assistance with banking, budgeting, food procurement, contractual arrangements, etc. on an individual basis as well as formal classes. This type of assistance is initiated during the summer preparatory program and remains an ongoing process as long as the student's need exists.

The students have formed their own clubs both on-campus and off for social and recreational purposes. They have gained valuable experience and insight in organizing and working together toward a common goal.

(9) *Academic counseling*

In light of the communication gap between hearing impaired students and college counselors, it is incumbent upon the project counselor to assist the students with course selection and curriculum requirements for their career area. The project counselor also coordinates special modifications of standard curriculum requirements to meet a special need of a student.

(10) *Assistance with housing*

Lee College being a community college serving a local area with a commuting student body does not have any dormitories. Therefore, as stated earlier, all the students in the project must depend on the community for housing. The project provides all students with assistance in locating suitable housing and monitors the current location of all students.

The project staff becomes aware of problems in apartment living through periodic visits with the students and in regular counseling sessions. The ultimate objective is to assist the student in reaching independence through mature personal-social growth.

SUMMARY

The Hearing Impaired Project at Lee College has been providing postsecondary training to hearing impaired students for six years. During this time the project staff has sought to assist the students to make a mature selection of a career field of study based on sound vocational evaluation and vocational counseling. A second major objective sought has been to foster independent living skills in the students by providing formal and informal experiences which instill social awareness as well as self esteem. The program staff is aware of the special needs experienced by students with severe hearing losses and does provide a full repertoire of supportive services to enable the students to take full advantage of the training available at Lee College.

As the Hearing Impaired Project continues to meet its two major objectives, it will continue to assess the needs of its students and revise the program accordingly to meet these needs.

REFERENCE

Stuckless, E. Ross (Ed.) "Principles Basic to the Establishment and Operation of Postsecondary Programs for Deaf Students." Washington, D.C.: Conference of Executives of American Schools for the Deaf, 1973.

A REPORT TO THE PROFESSION: THE TEXAS PLAN

John W. Butler, Ph. D., Superintendent, Office of Education for the Deaf, North Texas Region, Richardson, Tex.

Marvin Sallop, M.A., Acting Superintendent, Office of Education for the Deaf, Gulf Coast Region, Houston, Tex.

INTRODUCTION: HOW IT IS

The State of Texas is the largest of the 48 contiguous United States and comprises a land and water area of 267,339 square miles. It is divided into 254 counties and 1,200 school districts and has a population of 12 million.

The April, 1975, issue of the *American Annals of the Deaf* lists 48 programs serving deaf children in the State of Texas. These programs have not been coordinated to any great extent and each has operated independently from the others. The need for such coordination has become obvious in recent years when deaf children have been denied services due to artificial barriers such as county and school district boundary lines. A mandate for such coordination was legislated by the 63rd session of the Texas legislature.

A HISTORY: HOW IT WAS

Texas has a history of 119 years of service to deaf children. Since 1856, when the Texas Asylum for the Deaf and Dumb was established by the Texas legislature, several changes have been made in these services. In 1951 the state began funding public day school programs to serve mentally retarded, deaf and blind children. In 1959, the Texas legislature created funding for preschool deaf programs. In 1961, county-wide day school programs were legislated for geographical areas with sufficient populations of deaf children between the ages of 6 and 21. In 1969, Senate bill 230 created the comprehensive special education program for all exceptional children. In 1973, Senate bill 803 created regional schools for the deaf.

THE LEGISLATION: SENATE BILL 803

Senate bill 803 was legislated as an amendment to Section 11.10, Texas Education Code, by adding sub-sections (n) through (u). This permitted educational programming for deaf children the opportunity to go through a transition stage with a minimum of abrupt changes.

The law provides the following:

(*n*) *Intent*

"To continue a process of providing better education available to deaf children on a statewide basis in Texas, and to afford all deaf children an opportunity for achievement more equal to their peers with normal hearing."

(*o*) *Director of deaf education*

"With the responsibility to develop and administer a comprehensive statewide plan for deaf education services including continuing diagnosis and evaluation, counseling and teaching," and help facilitate:

(1) Assisting and counseling parents.
(2) As many children as practicable to be day students.
(3) Provide residential facilities when necessary.
(4) Enrolling children in the Texas School for the Deaf upon a needs basis.
(5) Encouraging integration into the mainstream of education.
(6) Recognizing individual differences in students to succeed under particular methods of communication.

(*p*) *Apportionment*

"Not more than eight nor less than five areas each furnishing a regional day school program for the deaf."

(*q*) *Regional Superintendents*

"Superintendents for each regional day school program for the deaf responsible to the Director of Deaf Education . . ."

(There are three paragraphs explaining intent of legislature for utilization of existing expertise, personnel, facilities, programs, personal property, etc.)

(*r*) *Costs*

"Shall be borne by the State and paid from the Foundation School Program Fund."

Funds appropriated by the 63rd Legislature (1973) shall be used to implement 803 as completely as may be possible during the biennium.

"With the first funds, however, hereby required to be expended for staffing and planning of the regional day school program."

The intent of (r) is to maximize all educational resources in the State to carry out the intent and objectives of 803.

(*s*) *Cost for Operation*

(1) $2,700 estimated allocation for each student per year.

(2) Salaries of regional superintendents and directors of deaf education shall permit hiring and retention of properly qualified person.

(3) TEA shall employ personnel (teachers, principals, supervisors, counselors, aides, etc.) in such numbers to be necessary to establish and operate the regional day school programs for the deaf.

(*t*) *Implementation for Planning*

TEA shall institute planning and research designed to accomplish intent and objectives of 803, including employment of director of deaf education and other essential personnel to meet the operational date.

(*u*) *Implementation Date*

"The regional day school programs for the deaf shall commence operation to the fullest extent possible on September 1, 1974."

A COMPARISON: COUNTY DAY PROGRAMS VERSUS REGIONAL PROGRAMS

In order to understand the significance of Senate bill 803 a comparison must be made between the existing county-wide day programs and the newly established regional programs. Some of the comparisons include:

County Day Programs	Regional Programs
1. Limited to one county having a population of 300,000 or any two contiguous counties having a population of 140,000 or more.	No population limitation.
2. Limited by county lines.	No limiting boundaries.
3. Served children ages 6–21.	Will serve children ages 3–21. Counsel parents of deaf children of all ages.
4. Provides teachers, principals, supervisors and visiting teachers based on formula.	No limiting formula—personnel approved on needs basis.
5. Operation allotment $700 per pupil.	Operation allotment up to $2,700 per pupil based upon needs, excluding personnel and residential component.
6. $3,000 per new unit to purchase transportation vehicles or contract, auditory and classroom equipment and other aids.	Budget may include these at anytime—not limited to new units—based upon need.
7. Districts usually must supplement budget.	Full funding by the State.
8. ESEA–89–313 Title I needed to supplement the budget.	Title I released for redistribution.

A SYSTEMATIC APPROACH: HOW IT WORKS

In order to provide quality educational programming for deaf children in the State of Texas, a needs assessment had to be conducted at the local, regional and state levels. At the local level, the school districts utilized their personnel, special education consultants, Texas Education Agency employees, special outreach teams, educational program directors and regional superintendents in determining specific needs of the deaf children identified. At the regional level, Regional Advisory Boards, Education Service Center personnel, university personnel, educators of the deaf and many other resources were utilized in the needs assessment. At the state level, personal travel, advisory councils, special study groups, workshops and administrative consultative teams were used in the needs assessment.

Determination of Alternatives

Once the needs assessment had been completed, various alternatives were determined to provide the most effective programming for deaf children. The alternatives varied from mainstreaming to self-contained classrooms and were determined by the needs of the program. These needs were developed into a regional strategy by the superintendent and were designed to bring together all the resources within the region to affect the best educational programming for deaf children.

The state design was compiled by the director and was published in "A Statewide Design for Education of the Deaf in Texas."

Selection of Alternatives for Funding

Upon the completion of the needs assessment and the determination of alternatives, the local programs negotiated for funding with the regional superintendent and the state director. Only the most effective alternatives for each program were recommended for funding.

Implementation

For the 1975–76 school year, 54 programs will be available to 4,527 deaf children in the regional programs and will offer various educational alternatives to meet the needs of these children.

Evaluation

The 54 educational programs within the State of Texas will probably vary from execllent to the less desirable. In order to determine the effectiveness of the programs a complete evaluation system will be utilized to evaluate the programs at the local, regional and state levels.

Program Revision

Upon the completion of the evaluation, revisions will be made to improve the programs. The regional concept is not viewed as a panacea, but does offer a systematic procedure for utilizing all the resources available in the state to effect change and improve the educational circumstances in the lives of deaf children.

DEMOGRAPHICS: THE CHILDREN TO BE SERVED

The exact number of deaf children residing in the State of Texas is not known due to the lack of a central registry established for this purpose. Recently the office of the director attempted to begin establishing and maintaining a registry of deaf children. Regional superintendents reported all known deaf children in their region to the state office on April 1, 1975. The summarized data indicates a total of 5,733 deaf children between the ages of 3 and 21 years residing in the state. Of these, 4,522 will be served in regional programs for the deaf in the 1975–76 school year.

THE GULF COAST REGION: A MICROCOSM

The initial planning to implement Senate bill 803 within the Gulf Coast region consisted primarily of locating deaf children and appraising existing programs and resources. The geographical entities within the region range from a large urban city to a rural area. Programs for the deaf range from a large county-wide program to isolated public school classes.

The initial survey indicated that there were 1,409 students who were probably eligible for our services residing within the Gulf Coast region. However, the region was apportioned on the basis of 600 known deaf students. In addition, it was estimated that an additional 200 deaf students were yet to be reported.

Of the 1,409 reported students, about 182 require special services, 115 were enrolled in the Texas School for the Deaf, and 430 were enrolled in county-wide programs. Of the remainder, 100 were in private schools, 193 were in regular classes and 389 were reported as being in special education programs in local districts.

A closer look at the reported 389 deaf students in local district special education programs indicated that many of these deaf students were in TMR classes, MBI, classes, LLD classes, and regular classes with special education services. A close focus on the nature of these services given deaf students showed a range from no special services to a weekly visit by a speech therapist.

We also found that several school districts had made a concerted effort to provide educational services to deaf children. Certified teachers of the deaf were hired and specialized materials and equipment were purchased. Due to local programming and financial considerations, however, these teachers were given teacher loads of up to 22 students and classes with students ranging from 4 to 16 years of age.

The geography of the region, we also found, resulted in some students traveling as much as 4 hours daily to receive special education services. Some students traveled 50 miles to a program simply because a municipal boundary line made them ineligible for a closer program.

We met with representatives of all the public programs and pointed out the benefits of mutual cooperation and the advantages provided under Senate bill 803. We emphasized that combining programs would allow for homogeneous groupings of students; provide a student population base for the justification of supportive personnel; eliminate isolated programs; provide for coordination and consultation; and allow for full program funding by the State.

One year of preplanning and one year of negotiations resulted in the formation of the Gulf Coast Regional Day School Program for the deaf in eight components to serve 1,097 students. Five of the eight components are cooperative programs incorporating 45 independent school districts. Two components are the conversions of previous county-wide programs to regional education programs. The remaining component is the conversion of an independent school district program to regional classes. In addition, three private programs were incorporated into component programs through the utilization of their facilities as off campus sites.

Under 803 programming, elementary students will be brought to two campuses within the Co-op area. Each campus will consist of 4 or 5 classrooms within a public elementary school facility. A single program supervisor will supervise the classroom instruction of both campuses. The teachers of the deaf, administratively, will be under the principal of the facility in which they are housed. Supportive services will serve both campuses.

The key to the success of the delivery of services within the Gulf Coast Region rests with the two component regional education programs. The Houston Regional Education Program will serve elementary and preschool students residing in Houston. It will also administer the regional high school and it will establish a regional deaf multihandicap service center for the entire region. Because of its present population base, which is projected to reach an enrollment of 500 students by 1980, it will be staffed with supportive services available to all component programs.

No claim is made that we have improved the quality of day to day instruction of deaf students. We have yet to officially open our doors. We have, however, established the mechanism for services delivery system. We have provided for program coordination not previously in existence. We have provided for diagnosis and evaluation from qualified personnel. And most importantly, we have provided for the personnel to bring experience and expertise to bear for the provision of quality services. Multiply the Gulf Coast Region by five and you will have a perspective of the planning needed to implement Senate bill 803 on a statewide basis.

CONCLUSION

The legislation of Senate bill 803 by the 63rd Texas Legislature provides an opportunity for educators of the deaf to expand and improve services to deaf children on a statewide basis. This law is thought to be an improvement and another step forward in the education of deaf children in Texas.

PANEL: ISSUES IN POSTSECONDARY EDUCATION PROGRAMS

Edward C. Merrill, Jr., Ph. D., President, Gallaudet College, Washington, D.C.

The topic for discussion this afternoon is "Issues in Postsecondary Education Programs." When we attend professional meetings such as this one, we hear descriptions of post-secondary programs that are occurring across the United States. This is a very fine development, for young deaf people—as well as deaf adults—have never had the variety of postsecondary programs from which to choose that hearing persons have had for many years. We applaud these developments, but we should also be sensitive to the fact that there still remains very significant problems and issues in postsecondary education for deaf persons. It is the purpose of this panel, therefore, to identify these issues and to point out possible approaches toward resolving them.

Prior to this meeting, I asked each of the panel participants to describe two or three of the major issues which he now perceives in postsecondary education programs for deaf persons. Each of them did this and I now have taken the liberty of summarizing and listing these issues for you. I will pass them out to you at this time. I will now ask each panel participant to take five minutes to present the major issues in postsecondary education to you as he sees them. After

each has made his presentation, we will then have a discussion among panel members and then we will be happy to receive questions and suggestions from the audience.

ISSUES IN POSTSECONDARY EDUCATION OF DEAF PERSONS

Issues in the postsecondary education of deaf persons are listed below as seen by the four participants on this panel. The issues are presented in this manner so that the panelists may spend less time presenting the issues and more time discussing their implications.

William Castle—NTID

1. How do we move to satisfy the needs for postsecondary education for all hearing-impaired persons who seek it?
2. How do we arrive at a postsecondary education model for the deaf which provides for its clients an appropriate balance between courses and experiences designed to teach them how to earn a living and courses and experiences designed to teach them how to live a life?
3. How can secondary programs in deaf education be helped to increase the proportion of graduates who are prepared to enter postsecondary education without having to go through extensive preparatory programs within the postsecondary environment?

Ray L. Jones—CSUN

1. What are the legal rights of the handicapped individual as they relative to postsecondary and higher education?
2. What are the implications of Section 613(a) of the Education of the Handicapped Act as it relates to postsecondary and higher education for handicapped students?
3. What are the implications of the Sweatt v. Painter decision of the Supreme Court for postsecondary and higher education of the handicapped?

Patrick W. Duggan—TVI

1. To what extent will vocational rehabilitation agencies serving deaf students pay direct expenses such as tuition, fees, books, supplies, room, board and travel for a deaf student to attend the school of his or her choice regardless of location?
2. How can the prior development of independent living skills be obtained for those deaf students entering postsecondary programs?

Gilbert L. Delgado—Gallaudet College

1. How can more deaf students have access to postsecondary education programs?
2. How can resources be re-deployed or realigned to accommodate more deaf students?
3. How can the educational process result in more realistic life-long learning for hearing impaired children and youth?

TWO ISSUES IN POSTSECONDARY EDUCATION

Patrick W. Duggan, St. Paul Technical Vocational Institute,
St. Paul, Minn.

One of the important issues regarding postsecondary education is the degree of acceptance for vocational rehabilitation agencies serving deaf students to pay direct expenses such as tuition, fees, books, supplies, room, board and travel for a deaf student to attend the school of his or her choice regardless of location. State rehabilitation agencies range from strong reluctance to total cooperation in sponsoring students out of state. The majority of states do appear willing to sponsor appropriate programs wherever they are available but even this cooperation is sometimes stiffled by lack of funds. Students and referring rehabilitation agencies are further frustrated with the pressures of "packaging" requirements expected in federal financial aide programs such as the Basic Opportunity Grant (BOG), the College Work Study (CWS), the National Direct Student Loan (NDSL), and the Federally Insured Student Loan Program (FISL). The possibility of support from the Social Security Income (SSI) also compounds the issue of providing financial assistance to students.

The question of equal access to education for deaf students regardless of location is a critical issue. State vocational rehabilitation agencies that fail to recognize advantages of programs offering opportunities of specialized support services is detrimental to free choice. Deaf students should have the right to freely choose appropriate programs to meet their individual needs. The solution to this issue is continued communication to state agencies, students, parents, residential schools and concerned deaf people regarding benefits available from all postsecondary programs serving deaf students. In some cases of state resistance, a strong endorsement of political action may be necessary.

There are no foreseeable easy solutions to the particular issue of the methods for providing support to students in various postsecondary programs. Many state rehabilitation agencies are trying to work out their own solutions to meet federal requirements of searching for alternative means of support. One strategy would be for schools serving deaf students to develop expertise regarding financial aid procedures and volunteer advisory services in assisting state agencies in packaging financial services. Other assistance must be provided at the high school level in preparing both students and parents for the maze of forms that must be processed.

A second issue in postsecondary programs serving deaf students is prior development of independent living skills. This is especially important for those postsecondary programs that provide limited or no dormitory facilities.

Students are often unable to cope with such intricacies as leases, utility bills, and car insurance. Other practical aspects of independent living involve shopping for groceries, meal preparation, nutrition, house cleaning chores, and sometimes maintenance. Expected behavior and regulation of apartment living are also unknown entities for many deaf students.

A majority of postsecondary programs offer formal classes as well as real experience of independent living for deaf students. However, prior education and simulated or real experiences in the junior and senior years of high school would serve deaf students well in preparation for the routine aspects of daily living. Some residential schools have provided opportunities in the senior year for students to live independently in apartments or houses which greatly facilitate the ability of this group to manage independent living adequately by the time they arrive at postsecondary programs.

Formal classes in home economics with practical aspects of cooking, sewing, maintenance, and scheduling of time would be helpful, in place of actual experiences, for both female and male students in learning to manage the expectations of daily independent living. Role playing of apartment situations such as signing leases, breaking leases, or giving notice is also beneficial in simulated living situations available within the structure of a classroom.

These two issues of financial support and independent living are only a few of many issues of postsecondary education. However, these two particular issues offer much opportunity for discussion and creative thinking to help establish and develop more effective postsecondary training for deaf students.

DEAF STUDENTS AND HIGHER EDUCATION AT CALIFORNIA STATE UNIVERSITY, NORTHRIDGE

Ray Jones, Ed. D., Director, Center on Deafness, University of California at Northridge, Northridge, Calif.

To the casual observer, the May 23, 1975, commencement exercises at California State University, Northridge, would have seemed typical of similar exercises held on hundreds of college and university campuses. A closer observation, however, would have revealed some very significant differences.

Thirty-four of the more than 5,000 students receiving degrees would not hear the formal exercises, nor would their deaf friends and relatives in the audience. However, they would be intently following the exercises through the flying fingers and moving lips of Mrs. Faye Wilkie, Interpreter for the Deaf at CSUN since 1965.

The 28 deaf students receiving M.A. degrees at these exercises would make a total of 153 deaf students receiving M.A. degrees at CSUN in the past 11 years.

Deaf students coming to the California State University at Northridge for graduate study have been enrolled in either of the following training programs:

(1) The National Leadership Training Program in the Area of the Deaf, and,

(2) The Training Program Preparing Teachers of the Deaf at the Secondary level.

The National Leadership Training Program in the Area of the Deaf has since 1964 graduated a total of 65 hearnig impaired students. A study, conducted in cooperation with the CSUN Office of Placement in June 1975, indicates that 58 of the 59 graduating prior to the current class (1975) can be located and all 58 are currently employed in rehabilitation or education programs serving the deaf. Positions held and salaries paid are comparable to those hearing classmates. Twenty-three have been accepted into doctoral programs at major universities and eight have now completed their doctoral work. (See Appendix A.)

The program preparing teachers of the deaf at the secondary level was established in 1969 and serves both hearing and deaf students across the nation.

A master's degree program for experienced teachers of the deaf provides an opportunity for deaf teachers of the deaf to come to CSUN for two successive summers to increase their knowledge of the disciplines in which they are teaching and to utilize innovative techniques for teaching secondary level deaf students.

Of the 63 deaf students completing master's degrees in these two teacher training programs, 62 were employed as teachers last year. The one exception is a housewife with two young children and has not attempted to find a teaching position. The number of graduates teaching in community colleges and vocational schools is most impressive. (See Appendix B.)

Support services for deaf students provided at CSUN include sign language interpreters who are trained to speak without voice and to simultaneously interpret the spoken word into signs and fingerspelling. Notetaking is provided where needed, special counseling, advance registration, and tutoring services are provided through a Campus Services for the Deaf unit.

Last year, these services enabled the University to serve a total of 231 hearing impaired students. In the spring semester, 132 hearing impaired students were registered in 326 regular University classes.

As a result of this integration of deaf students into regular classes, an estimated 6,000 non-handicapped students attend daily or weekly classes in which there are one or more deaf provided (usually in-which some type of support services are being provided (usually interpreting in sign language). The presence of deaf students and an interpreter generates a great deal of interest in sign language and each semester more than 300 hearing students enroll in sign language classes. As students gain proficiency, some are employed as interpreters.

Each year, deaf professors teach regular courses in the University. Dr. Larry Fleischer serves as assistant professor in the School of Education, and last year, Professor Alan Crammatte from Gallaudet College served as a visiting professor in the School of Business teaching regular classes in research and accounting. This year, Robert Panara from the National Technical Institute for the Deaf will serve as a visiting professor teaching regular classes in the departments of English and Drama.

Research relating to the eleven year record of CSUN service to deaf students confirms that:

(a) Given nominal support services, there is no significant difference in the achievement of deaf and hearing students at CSUN. (1)

(b) Upon completion of training, deaf students preparing to teach the deaf find competitive employment as teachers in both public and residential schools in California and across the nation. (See Appendix B.)

(c) Upon completion of the National Leadership Training Program, deaf graduates find competitive employment as supervisors, administrators in both rehabilitation and educational programs serving the deaf. An impressive number of deaf graduates are employed in decision making positions in state departments of rehabilitation, day and residential educational programs, and in college and university programs. (See Appendix A)

(d) Given reasonable support services, qualified deaf students can succeed in doctoral programs.

REFERENCES

1. Murphy, Harry J., Ed.D., "A Comparative Study of Academic Achievement Between Hearing Impaired and Non-Hearing Impaired Students at California State University, Northridge (CSUN)," 1975.
2. Gassert, Dr. Leland C., "Placement Survey of Deaf Students," Career Planning and Placement, CSUN, 1975.

Appendix A

CURRENT EMPLOYMENT OF DEAF MASTER'S DEGREE GRADUATES OF THE NATIONAL LEADERSHIP TRAINING PROGRAM IN THE AREA OF THE DEAF—1964–1974 CALIFORNIA STATE UNIVERSITY AT NORTHRIDGE[1]

Coordinator of State Vocational Rehabilitation Services for the Deaf

Dr. Robert Sanderson (1965), Coordinator, Services for the Deaf, Utah.

Ralph White (1966), Program Specialist, Texas Education Agency.

David Myers (1969), State Coordinator, Services to Hearing Impaired, Massachusetts.

Robert Griffith (1973), Acting Chief, Services to Deaf and Hard of Hearing, Illinois.

Rehabilitation Counselors for the Deaf

Henning Irgens (1964), Deaf Consultant, Plainswill, Michigan.

Richard Wright (1970), Rehabilitation Counselor, San Francisco, California.

John Lopez (1973), Rehabilitation Counselor, CSDR Berkeley, California.

Bureau of Education for the Handicapped

Ernest Hairston (1967), Education Program Specialist, Washington, D.C.

Programs Serving Multihandicapped Deaf

Timothy Jaech (1966), Principal Unit II Multihandicapped Deaf, CSDR, Riverside, California.

Marjoriebell Hocomb (1968), Regional Field Agent, Deaf/Blind program, Newark, Delaware.

State Commissions for the Deaf

Barbara Babbini (1969), Executive Director, Connecticut State Commission for the Deaf, West Hartford, Connecticut.

Fred Yates (1967), Executive Secretary, Virginia Council for the Deaf, Richmond, Virginia.

University and Junior College Faculty

Larry Fleischer (1972), Assistant Professor, Special Education, CSUN, Northridge, California.

---

[1] As of June 1, 1975.

Dr. George Propp (1966), Assistant Director Specialized Office for the Deaf and Hard of Hearing.

Ramon Rodriguez (1967), Assistant Professor, Gallaudet College, Washington, D.C.

Dr. Gerilee Gustason (1968), Assistant Professor of Education, Gallaudet College.

Howard Busby (1973), Coordinator, Teacher Training Program, University of Wisconsin.

Lucille Miller (1971), Coordinator Hearing Impaired Program, Pasadena City College, Calif.

Barbara Boyd (1973), Coordinator, Tutorial Program CSUN, Northridge, California.

Eileen Simpson (1974), Student Personnel Specialist CSUN, Northridge, California.

Christopher Hunter (1972), Consultant Hearing Impaired Program, William Rainey Harper College.

Anna Maria Rinaldi (1973), Coordinator of Career Programming for the Deaf, Salem, Oregon.

Superintendents and Assistant Superintendents, Residential Schools for the Deaf

Roy Holcomb (1968), Director, Margaret Sterck School, Newark, Delaware.

Dr. Jerome Freeman (1966), Assistant Superintendent, Kentucky School for the Deaf, Danville, Kentucky.

Bert Poss (1967), Assistant Superintendent, Michigan School for the Deaf, Flint, Michigan.

Dr. Harvey Corson (1970), Assistant Superintendent, Kentucky School for the Deaf, Danville, Kentucky.

Mental Health Facilities for the Deaf

Greg Kimberlin (1969), Director Resthaven Mental Health Center, Los Angeles, California.

Inwood Smith (1971), Educational Specialist-Therapist, St. Elizabeth Hospital, Washington, D.C.

Principals and Supervising Teachers, Residential Schools

Tom Dillon (1964), Principal, New Mexico School for the Deaf, Santa Fe, New Mexico.

Gerald Burstein (1965), Coordinator Library-Media Services, CSDR Riverside, California.

Ray Butler (1966), Vocational Supervising Teacher, Florida School for the Deaf.

Robert Anderson (1967), Associate Principal, Illinois School for the Deaf, Jacksonville.

Edward Corbett (1971), Director Federal Programs, Margaret Sterck School, Newark, Delaware.

William Swaim (1972), Principal, California School for the Deaf, Berkeley.

Richard Babb (1969), Consultant American School for the Deaf, Connecticut.

Lydio Trujillo (1972), Dean of Students, St. Marys School for the Deaf, New York.

Delbert Erickson (1974), Supervising Teacher Upper School, South Dakota School for the Deaf.

Mark Wait (1972), Assistant Vocational Principal, Maryland School for the Deaf.

Dr. Victor Galloway (1965), Director of Development Education, Model Secondary School for the Deaf, Washington, D.C.

Dr. Ronald Nomeland (1970), Program Supervisor Educational Technology, Kendall Elementary School, Washington, D.C.

Principals, Directors, Assistant Principals, Public Schools for the Deaf

Douglas Burke (1965), Director Educational Programs for the Deaf, El Paso, Texas.

Herbert Larson (1965), Assistant Principal, Selaco Downey High School. California.

Virginia McKinney (1969), Language Reading Specialist, Marlton School, Los Angeles.

Robert Boltz (1972), Principal, Hilda Knoff School for the Deaf, Haraham, Louisiana.

John Murray (1973), Special Education Supervisor, Brownsville, Texas.

Teachers Public School Programs for the Deaf

William Simpson (1966), Teacher/Counselor, Alhambra High School, Alhambra, California.

Warren Jones (1970), Teacher Aurally Exceptional Kern County, Bakersfield, California.

Lyle Hinks (1973), Media Resource Teacher and Coordinator, Downey, California.

Leonard Meyer (1974), Vocational Training Instructor, Downey, California.

Teachers, Residential School Programs for the Deaf

Emil Ladner (1971), Vocational Guidance Counselor, American School, West Hartford, Conn.

Jeremiah Germany (1973), Vocational Adjustment Teacher, California School for the Deaf, Berkeley.

Harold Deuel (1974), Teacher, North Carolina School for the Deaf, Morganton.

Nancy Rarus, Teacher, American School for the Deaf, West Hartford, Connecticut.

David Peterson (1973), Elementary Adjustment Teacher, California School for the Deaf, Berkeley.

Speech and Hearing Centers

Lawrence Peterson (1968), Educational Specialist, Seattle Speech and Hearing Clinic.

Adult Education

John Spellman (1972), Director, Adult Education, Rhode Island School for the Deaf.

Elizabeth Spellman (1972), Teacher Adult Education, Providence, Rhode Island.

Unknown

Robert Johnson.

Summary of current employment of deaf MA graduates of the National Leadership Training Program in the area of the deaf (1964–1974)

State coordinators of vocational rehabilitation services for the deaf	5
Rehabilitation counselors	3
Bureau of Education of the Handicapped	1
Programs serving multihandicapped deaf	2
State Commissions for the Deaf	2
University and junior colleges	10
Superintendents and assistant superintendents, residential schools	4
Mental health facilities for the deaf	2
Principals and supervising teachers residential schools	12
Principals, directors, assistant principals, public schools for the deaf	5
Teachers, public schools for the deaf	4
Teachers, residential school programs for the deaf	5
Speech and hearing centers	1
Adult education programs for the deaf	2
Total	58

APPENDIX B

CURRENT EMPLOYMENT OF DEAF MASTER'S DEGREE GRADUATES OF THE TEACHER PREPARATION PROGRAMS CALIFORNIA STATE UNIVERSITY AT NORTHRIDGE[1] 1966–1974

University College and Junior College Faculty

Dr. Larry Fleischer, 1972, Asst. Professor, CSUN, Northridge, California.

Marcia Kessler, 1970, Golden West College, Huntington Beach, California.

Anna Marie Rinaldi, 1972, Chemeketa Community College, Salem, Oregon.

David McKee, 1973, Mesa College, San Diego, California.

Vicki Santillanes, 1973, Pierce Junior College, Woodland Hills, California.

Kenneth Pedersen, 1974, Mesa College, San Diego, California.

Agnes Padnen, 1973, Gallaudet College, Washington, D.C.

Barbara Stevens, 1973, Gallaudet College, Washington, D.C.

Public Schools for the Deaf

Etta Stecker, 1970, Los Alamitos High School, Los Alamitos, California.

Darlene Krusemark, 1971, Selaco, Downey, California.

Al Bond, 1972, Marlton School, Los Angeles, California.

John Goul, 1972, Marlton School, Los Angeles, California.

Kathy Holland, 1972, Southwest School for the Hearing, Lawndale, California.

Ron Chandler, 1973, Roosevelt School, Compton, California.

Doug Ellis, 1973, Selaco, Downey, California.

Wendy Gordon, 1973, Taft School, Santa Ana, California.

Connie Henes, 1973, Riverside City Schools, Riverside, California.

Vadja Kalombotovic, 1973, Grossmont High School, La Mesa, California.

Jeff Lenham, 1973, Southwest School for the Hearing, Lawndale, California.

---

[1] As of June 1, 1975.

Lenny Meyer, 1973, Selaco, Downey, California.
Barbara Richardson, 1973, Marlton, Los Angeles, California.
Mont Richardson, 1973, Marlton, Los Angeles, California.
Gary Vale, 1973, Simi Unified Schools, Sim Valley, California.
Gene Williams, 1973, South Hills High School, Covina, California.
Bonita Whelan Bennett, 1974, Ventura Unified School District, Ventura, California.
James Bennett, 1974, Ventura Unified School District, Ventura, California.
Bruce Gross, 1974, Glendale Unified School District, Glendale, California.
Lyle Hinks, 1974, Selaco, Downey, California.
Mary Pat Jones, 1974, Wichita Public Schools, Wichita, Kansas.
Lillian Quartermus, 1974, Marlton, Los Angeles, California.
Linda Raymond, 1974, Covina Unified School District, Covina, California.
Lillian Skinner, 1966, Simi Valley Unified Schools, Simi, California.
George Stecker, 1973, Anaheim High School, Los Alamitos, California.
Michael Wukadinovich, 1973, Anaheim Jr. High School, Anaheim, California.
Helen Kaleta, 1974, St. Johns School, Milwaukee, Wisconsin.
John Kaleta, 1974, St. Johns School, Milwaukee, Wisconsin.
Michael Tuccelli, 1974, St. Johns School, Milwaukee, Wisconsin.
Deane Wells, 1974, Ina Arbuckle School, Riverside, California.

Residential Schools for the Deaf

Mike Holland, 1972, Colorado School for the Deaf, Colorado Springs, Colorado.
Ora Slinko, 1972, American School for the Deaf, West Hartford, Connecticut.
Kay West, 1972, Indiana School for the Deaf, Indianapolis, Indiana.
William Baim, 1973, California School for the Deaf, Berkeley, California.
Joann Burdette, 1973, California School for the Deaf, Berkeley, California.
Judy Stein Cronlund, 1973, American School for the Deaf, West Hartford, Connecticut.
Greg Decker, 1973, California School for the Deaf, Riverside, California.
Mike Finneran, 1973, California School for the Deaf, Riverside, California.
Brian Malzkuhn, 1973, California School for the Deaf, Riverside, California.
Richard Gebo, 1974, Montana School for the Deaf, Great Falls, Montana.
Mark Nagy, 1974, Illinois School for the Deaf, Jacksonville, Illinois.
James Womack, 1974, Model Secondary School for the Deaf, Washington, D.C.
Art Dignan, 1974, Florida School for the Deaf, St. Augustine, Florida.
Mary Herrold, 1973, West Virginia School for the Deaf, Romney, West Virginia.

Stephen Baldwin, 1974, Utah School for the Deaf, Ogden, Utah.

Seymour Bernstein, 1974, California School for the Deaf, Riverside, California.

Marjorie Des Marais, 1974, Alabama School for the Deaf, Talledega, Alabama.

Evelyn Kamuchey, 1974, Texas School for the Deaf, Austin, Texas.

Richard Koch, 1974, Virginia School for the Deaf, Stanton, Virginia.

Esperanza Latimer, 1974, New Mexico School for the Deaf, Santa Fe, New Mexico.

Daniel Lynch, 1974, California School for the Deaf, Berkeley, California.

Anna Lee Swaim, 1974, California School for the Deaf, Berkeley, California.

Anne Wallis, 1974, Texas School for the Deaf, Austin, Texas.

Barbara Lehman Womack, 1973, Kendall Elementary School, Washington, D.C.

Other

Vera Fleischer, 1974, Housewife, Northridge, California.

Summary of current employment of MA graduates of CSUN teacher training program, 1966–74

Faculty of university, college and junior college	8
Teachers in public schools for the deaf	30
Teachers in residential schools for the deaf	24
Not employed last year	1
Total	63

PANEL: ISSUES IN POSTSECONDARY EDUCATION PROGRAMS

William Castle, Ph. D., Dean, National Technical Institute for the Deaf, Rochester, N.Y.

Examination of the many issues which exist currently with respect to postsecondary education leads me to bring special attention to the following three:

(1) How do we move to satisfy the needs for postsecondary education for all hearing impaired persons who seek it?

(2) How do we arrive at a postsecondary education model for the deaf which provides for its clients an appropriate balance between courses and experiences designed to teach them how to live a life?

(3) How can secondary programs in deaf education be helped to increase the proportion of graduates who are prepared to enter postsecondary education without having to go through extensive preparatory programs within the postsecondary environment?

Regarding the matter of accommodating all deaf persons who need and/or desire postsecondary education, it must be noted that the recent census of the deaf suggests that the number of leavers from secondary programs of study is over 8,000 per year rather than 3,000 to 3,500 figure that was used in 1964 to help give rationale to the creation of the National Technical Institute for the Deaf (NTID). In addition, there is a growing declaration of need and/or desire for continuing education for deaf adults of all ages.

The recent Quie amendment regarding postsecondary education for the handicapped and the establishment of a National Center for Continuing Education at Gallaudet are important steps in the right direction for dealing with this issue. However, the fact remains that additional, more specific, and broader legislation may be required in order to bring fullest resolution to the issue.

A model for providing a good balance between general education and technical education is something that all programs of postsecondary education for the deaf should work at achieving. They need not do so unilaterally, however; some opportunities for consortia must certainly exist. For instance, an active student exchange program might very well be implemented between Gallaudet and NTID. The larger programs in postsecondary education could work together to agree upon a working model of career development which would emphasize in a balanced way the development of personal, social, and cultural skills and the development of communication skills alongside the development of technical skills required for given kinds of employment. Gallaudet and NTID could actively encourage some of their graduates to go into graduate programs in the respective environments of the other institution. Some junior college programs could actively undertake preparing deaf students to enter Gallaudet or NTID at the upper division level.

The matter of aiding secondary programs for the deaf to become better at what they are doing requires that at least two specific things occur with some immediacy: (1) Programs of postsecondary education for the deaf must implement and maintain active programs of feedback to the secondary schools about how their graduates are faring and about research data that suggest appropriate programmatic changes and (2) more teacher training programs designed specifically to train secondary teachers for the deaf must be created; and such programs should be designed to emphasize subject-matter expertise, curriculum development and evaluation expertise, and expertise in deafness and communication with the deaf.

PANEL: ISSUES IN POSTSECONDARY EDUCATION FOR THE DEAF STUDENT

Gilbert L. Delgado, Ph. D., Gallaudet College

I. ACCESSING THE DEAF STUDENT TO POSTSECONDARY EDUCATION

Statement of problem

Though the number of hearing impaired student in postsecondary programs is increasing (2,271 reported in 27 institutions in 1972 [1], and estimated 2800 in 53 institutions in 1974 [2]), the total is 8% [3], as compared to 28% of hearing students in college nation-wide.[4]

---

[1] Stuckless, E. Ross and Delgado, Gilbert L., A Guide to College/Career Programs for Deaf Students." National Technical Institute for the Deaf and Gallaudet College, 1973.

[2] Figure supplied by the Office of Demograhic Studies, Gallaudet College.

[3] *Ibid.*

[4] *Ibid.*

Why are these students not enrolled in programs? One answer is that they represent a very small percentage of the overall population and, hence, are not a high priority "needs" group. Another explanation is that too often admissions requirements are ill-suited to measure the entry level skills of the hearing impaired student; many cannot qualify. Still another reason is that opportunities for postsecondary education for the hearing impaired person are relatively new. One might say that, excluding Gallaudet College, the impetus had its beginning in 1964 with the passage of P.L. 89–36 for NTID.

Strategies

Public awareness with respect to the potential and indeed the right of the hearing impaired person to receive a higher education. Educators and administrators at the national, state, and local levels must be persuaded to open their doors to this public.

More must be done to orient the deaf community to life-long learning. It is interesting to note that about 12 students a Gallaudet College are over 30, but the Washington, D.C. area is somewhat unique in this regard.

The mass media needs to be alerted to successes, present developments and trends, and the still existing needs.

Postsecondary programs worth their mettle should provide the hearing impaired student a program which is committed to his/her needs. This has been amply discussed in the publication "Principles Basic to the Establishment and Operation of Postsecondary Education for Deaf Students." [5]

II. REDEPLOYMENT OR REALIGNMENT OF RESOURCES TO ACCOMMODATE STUDENTS

Developments in postsecondary education such as Universities Without Walls, External Degrees, Contracts, Modules, Consortia, State University networks, etc.[6] so well described by the Commission on Non-Traditional Study in Diversity By Design (Gould, 1973) are dramatic evidence of the move 1) to make resources easily obtainable by students, and 2) to capitalize on existing human resources and facilities to provide students with the necessary depth of programming without duplication.

Postsecondary programs for hearing impaired students have often "occurred." That is, they have at times come into existence with little or no regard to demographic data or regional or national needs. Availability and interest on the part of the institution have been a basic reason for opening a program. Of the 27 postsecondary programs reported in "A Guide to College/Career Programs for Deaf Students" [7] the range of students enrolled is from 4 to 942.

Strategies

With accurate data now emanating from the National Census of the Deaf and the Office of Demographic Studies, we can now clearly identify where the populations of hearing impaired students are located. The trick then is to put students and resources together in order to provide the best programs and most comprehensive opportunies to accommodate a necessary critical mass. This may call for an in-depth study, crossing state lines to develop a regional network of programs which allow options and mobility to the hearing impaired student. This would be no small undertaking.

---

[5] Stuckless, E. Ross, "Principles Basic to the Establishment and Operation of Postsecondary Programs for Deaf Students." Conference of Executives of American Schools for the Deaf, 1973.

[6] Gould, Samuel B., *Diversity by Design*. Commission on Non-Traditional Study, Jossey-Bass, 1973.

[7] Stuckless and Delgado, *op. cit.*

Existing national programs must tool up to extend their resources and services in outreach formats. The status quo, ivory tower concept of the larger programs is short-lived in today's times. We have to "branch out"!

Packaging instructional materials, designing credit and non-credit courses for home and/or center for the deaf consumption is a long overdue strategy.

III. REALISTIC LIFE-LONG LEARNING

A very significant issue in the educational process and career of hearing impaired children and youth is the lack of career education. There are current trends to remedy this, hopefully, but we have a long way to go.

It is interesting to note that the *College/Career* booklet indicated there were 147 "majors" offered in 27 postsecondary programs. A study by Munson [8] of occupational areas in upstate New York shows there are over 2000 areas of work in which deaf persons could function.

Since vocational education has its genesis in schools for the deaf, job or vocational outlets have permeated programming at the higher levels.

Strategies

As mentioned above, consideration should be given to a network of comprehensive programs to provide a larger array of training areas.

Such a network should include flexible and realistic guidelines for transferring students within the programs.

Students with high academic potential should not be limited to any particular program because of physical or financial constraints. Leaders of the deaf community, leaders indeed in any field, need counseling services to ensure the highest level of intellectual development.

Coordination of such a network can be as formal or informal as necessary. In short, competing amongst programs may not be in the best interests of the students and can, in time, lead to serious economic problems such as those faced by scores of postsecondary institutions. I do not believe any of us want this to happen.

TECHNICAL EDUCATION PROGRAMS FOR THE DEAF

William Otis, Supervisor, Columbus Technical Institute,
Program for the Deaf, Columbus, Ohio

At Columbus Technical Institute we are essentially an on-campus support services organization. The students we serve represent a very large range of hearing impairment and of academic success. As such our program must be as flexible as possible. Generally speaking we offer the following basic services.

---

[8] Munson, Harold L., "A Proposal for the Study of Employer and Non-Employer Toward the Employment and Utilization of Deaf Workers," University of Rochester, 1974.

I. INTERPRETERS

We recruit and train highly qualified interpreters. In our institution interpreters must have a working knowledge of currently popular forms of sign language such as Ameslan, Seeing Exact English, Signing Essential English, Manual English, and any local variations. They must be able to simultaneously sign and speak. In addition to regular duties our interpreters must also assist in tutoring situations and in the development of films of new technical signs to be used in the classroom. We currently make use of local persons who are trained in our program.

Additionally, most interpreters have satisfied the requirements for Class A Certification issued by the National Registry of Interpreters for the Deaf (RID).

II. TAPES

The program for the hearing impaired must take cognizance of the fact that sign language, as it is normally practiced, does not utilize terms common to technology. The coordinator of interpreters and the interpreter staff, in cooperation with Columbus Technical Institute Video Labs develop special training films for technical terminology. These films are available for most technologies offered to hearing impaired students. At present the following areas are represented in the technical signs film library:

Accounting, Architecture, Business Data Processing, Graphic Communication, Dental Lab, and Medical Lab.

III. NOTETAKERS

Notetaking services have been developed because hearing impaired persons would not be able to watch their interpreter while taking notes. This would cause the students to lose valuable input of information while writing.

The paper used is treated to copy on to as many other sheets as wanted. No carbon copies are needed. In this manner the notetaker gets a free copy and the hearing impaired receive the originals.

IV. COUNSELING SERVICES

Students integrated into the normal classes at Columbus Tech must learn to cope with wide variety of situations in which stress is a factor. The hearing impaired program has hired a counselor/placement specialist to work specifically with our students. Our counselor has nine years of rehabilitation experience and was named the Great Lakes Area Counselor of the Year for 1974. He is presently completing his requirements for a MA in school counseling at the University of Dayton.

Our students receive counseling assistance in the areas of Personal-Social, Academic, and Career Guidance.

The wide range of past personal and educational experience of the student body makes this a very challenging position.

V. SUMMER PRE-TECH

Students enrolling in the hearing impaired program come from public high schools or residential schools. Some are exclusively lipreaders while other are training in manual communication. Although a basic high school degree is required for entrance there remains a wide variance in performance from individual to individual. As such Columbus Tech has developed a summer program with emphasis in the areas of English, Mathematics, and Career Orientation.

The Summer Pre-Tech permits our staff to better evaluate the performance of each new student before he is formally enrolled in one of our technologies.

Our summer Pre-Tech program has demonstrated a higher student retention rate than among students who entered directly into the formal technical area of their choice. Further development of specific preparatory courses lending into the formal technical curriculum at CTI should result in an even higher retention rate.

In terms of on-campus student life our students have access to any organizations or teams that are available. We even were represented by a cheerleader on the basketball squad last winter. This same person was the May Day Queen last year and reigned for one year. Our young men were active on the baseball team and additionally had teams in intramural football, basketball and bowling. The latter group won four trophies.

Last year our students met to discuss establishing a hearing impaired chapter to the student body but this idea has not been fully developed yet.

At Columbus Tech the off-campus activities are not officially under our control. We do assist students in locating apartments in good areas and in finding acceptable roommates however we are not directly responsible for this service. We can usually also be called upon to help in any problems or disputes that may occur. As of this date we have had no problems of a serious nature.

Another area of some concern is transportation. A good percentage of Columbus Tech students own cars and others use our bus system. At present the best apartments are in areas that the bus company has yet to cover. Students work this out by either walking to the nearest bus stop in a shopping center or arrange for rides with car owners. In addition, car owners form car pools which helps to cut expenses.

By necessity our students are an independent lot of young adults. They survive, even excel, in an environment as demanding and stressful as any they are likely to meet later. If our program is to continue it will need to draw on this population and any success we achieve will be directly related to the courage and resourcefulness of our students.

COMMUNITY EDUCATION AND SCHOOLS FOR THE DEAF

Judy Athey, Administrative Coordinator, Maryland School for the Deaf, Frederick, Md.

A little person-to-person contact can go a long way in generating exciting new programs involving deaf children and adults. Community education requires a spirit of cooperation between the school for the deaf and everything that lies outside the walls of the school.

Whereas many times in schools for the deaf we try to do everything ourselves, sometimes advisement, referral, liaison, and a few quick phone calls are all that is needed to make better use of what the community has already done. This type of community relations work is essential to improving existing services to the deaf and creating new ones. Improvements in the K-12 curriculum are also possible by making use of all the resources available to public education and adapting or selectively utilizing what will work in your program.

WHAT YOU CAN DO

By taking a leadership role in its own community, the school generates a "can do" attitude toward deafness, and can help bring about improved communication with the deaf in hospitals, police stations, libraries, government agencies and private businesses. The long term benefits of community education are countless.

Staff members of the schools and programs for the deaf sometimes question their ability to get involved; they view constraints of time and budget as insurmountable obstacles. By starting on a small scale and by including the community in normal activities, staff can improve the existing program before it begins to expand. Here are some ways to get started:

(1) Begin with activities which are of immediate benefit to your students; for example, you might use community facilities which are better than your own for art classes, swimming classes, etc.

(2) Don't give up if one agency will not or cannot cooperate. Try another.

(3) Follow up on every call to the school for information or requests for increased involvement with the school. One thing often leads to another.

(4) Delegate community contacts to appropriate staff members according to their interests and responsibilities.

(5) Ask public agencies to help get your program up to date regarding developments in their fields. Call in local curriculum specialists for brainstorming sessions on the development of materials for deaf children; ask for a media workshop from the services available.

(6) Ask personnel of your vocational and/or career education departments to provide you with a report on community resources being used. Encourage the development of a work-study program and visitations to a variety of industries and businesses.

(7) Conduct an open house combined with an activity to which the public is invited. Tours, mini sign lessons, films, and socialization with deaf people can do as much or more than a formal workshop in awakening public awareness about deaf people in the community.

MARYLAND'S PROGRAM

Community involvement at the Maryland School for the Deaf includes:

(1) Local drama group uses the school's auditorium for productions.

(2) Restoration of an on-campus historic landmark is being done cooperatively with the local historic society and the state government.

(3) Cooperation with the Division of Vocational Rehabilitation resulted in a full time conselor assigned to the school.

(4) Local 4H groups received training in manual communication and developed a program for our students.

(5) Local employers provided work study positions for Maryland School for the Deaf students.

(6) Local board of education lent materials of instruction to the school.

(7) A cooperative effort between the Maryland School for the Deaf and a state residential facility for the mentally retarded will result in training for staff working with the severely multiple handicapped deaf.

(8) A local community college program includes continuing education for the deaf and interpreter training; programs in vocational training and an associate of arts degree program for the deaf are being planned.

(9) The Maryland State Department of Education, the Maryland School for the Deaf, and Gallaudet College are cooperatively funding a position for a coordinator of continuing education for the deaf in Maryland.

(10) Staff members of the Maryland School for the Deaf advise several nearby colleges, as well as community agencies (such as libraries and Departments of Recreation and Parks), in the development of a variety of programs involving the deaf.

YOU'VE ALREADY BEGUN

You probably recognized some similar arrangements in your own school or program for the deaf. Community education as a concept is not new, but it has been underutilized by our profession, which can benefit a great deal from its growth.

If you make the most of what you have in your own backyard, you will educate the public about deafness in the same effort.

ONE YEAR IN COMMUNITY EDUCATION

Paul Boynton, Community Education Coordinator for the Deaf,
North Carolina School for the Deaf, Morganton, N.C.

The community education effort for the deaf in North Carolina has met with seemingly exaggerated success. Based on a limited budget we have reached new heights in dividends returned on initial investment. We have made the apathetic deaf adults think for themselves and have moved them to action. They handled the reins gingerly at first and then, encouraged by success, more firmly as time went on. It was the first time that anyone in authority had ever asked for their opinion or sought the assistance of the general deaf population. The results speak for themselves.

It is documented that community education "touched" directly in excess of 1,200 deaf people in North Carolina, not including the hundreds more who benefited indirectly because of the activities that promoted awareness to the needs of the deaf. Furthermore, that figure does not include the thousands upon thousands of general public citizens that have become more sensitive and more knowledgeable to the truths about deafness. North Carolina, for years, has been acutely aware of the need to publicize and because of staffing this position of community education coordinator we were able to multiply many times over our previous efforts at getting to the public.

The community education concept is deeply entrenched in the minds of the deaf in North Carolina. They sensed in the beginning that this was a different kind of the so-called "help for the deaf" organizations. The first step toward community education in North Carolina was to enlist the assistance of the general deaf adult population of Burke County. We needed their help to conduct an accurate needs assessment.

The needs assessment drew many of the stalwarts of the deaf community but it became apparent from the beginning that it takes many hard hours of convincing to bring out the citizens who needed the help the most.

One of the more effective means of generating awareness within the deaf community was by capitalizing on the excitement of a few of the more aggressive deaf citizens. I asked fifteen energetic adults to become a task force to go into every home of every deaf adult and give them information on local community service agencies and to get feedback from them as to their wants, needs and desires. We educated the task force by way of a workshop held by six of the major community service agencies. These agencies gave out facts and materials on services already available to the deaf that they may not be aware of. By having this task force we (1) got 15 deaf adults directly involved in community education, (2) distributed information from deaf adult to deaf adult on available services, and (3) developed deaf awareness for the participating agencies.

The steering committee was another critically important step in getting the deaf involved. The committee was composed of seven hearing and eight deaf members. The task force also attended committee meetings so that meant 23 deaf and 7 hearing persons at most of the committee meetings. This gave them a sense of pride and a much needed sense of worth toward the community education effort.

It started with the needs assessment and is destined to continue to grow and be nurtured by its successes. My role in this effort is coming to a short recess at the end of June, however. I leave with great elation. Mr. Rance Henderson once said that I must be on an "ego trip" but not so. Many people take and do many different things to achieve a sense of euphoria—I get mine through a steady diet of community education and the constructive changes it can bring to society.

Community education is alive and lives in North Carolina.

JOB PLACEMENT AND NEW CAREERS

Terry Kemp, State Coordinator for Communicative Disorders, Department of Vocational Rehabilitation, Raleigh, N.C.

Employment

Before getting into a discussion on job placement and new careers for deaf people, I would like to briefly review with you the past and current employment situation of deaf persons.

The National Census of the Deaf [1] and other studies have revealed that while deaf people are employed in all occupations from professional to domestic, the largest proportion are non-transit operators; i.e. (they run machines of various kinds). A large portion of these positions require unskilled or semi-skilled workers.

The major share of deaf people is in manufacturing. Unfortunately, the government anticipates that the percentage of manufacturing jobs in the labor force will decline by 1980. Deaf workers are far behind in professional, clerical, sales, and service positions—the four fastest growing categories. This means that in the future the types of jobs deaf people occupy will comprise a smaller percentage of the total labor market, and that the competition will be greater for the jobs that deaf people now hold.

Unemployment

Are many deaf persons unemployed? According to the National Census the following unemployment pattern was revealed in 1972:

1. Deaf males had a smaller percentage of unemployment than the general population for all males. (3 percent versus 4.9 percent)
2. Deaf females are more frequently unemployed than females in general. (10.2 percent versus 6.6 percent)
3. Non-white deaf males and females have much greater rates of unemployment than do non-whites in the general population.
4. Young deaf adults have the highest rates of unemployment. (For ages 16–24, 23.1 for deaf youth versus 13 for the general population.)

The current recession has hit manufacturing positions particularly hard. In North Carolina the four industries which have employed the largest number of deaf people are textiles, hosiery, furniture, and apparel. In January, 1975, these four industries had an average unemployment rate of approximately 23% as compared with the overall unemployment rate of 10.1%. On the other hand, the retail trade business which employs few deaf people had a 1.9% rate of unemployment and the service occupations had a 3% rate of unemployment. It would appear that larger numbers of deaf people are unemployed in North Carolina as a result of the recession than is the case for the general population.

Career development

In order to expand vocational opportunities for deaf young people, we must do a better job in helping them to obtain a sense of self-worth. They must see the importance of doing a job well and feel that they have the ability to meet employer expectations. Most important, they must understand their potentials as well as their limitations.

Deaf young people must be helped to develop a better understanding of various occupations. As you know, deafness causes a delay of natural exposure to the type of information necessary to learn about different jobs. In order to overcome this barrier, it is imperative that educators take every opportunity to relate classroom experiences to an actual work situation. This process must be built into the school curriculum for all age groups.

---

[1] Schein, J. D., Delk, M. T., "The Deaf Population of the United States." The National Association of the Deaf, 1974.

We must assist deaf young people in evaluating their abilities as compared to the demands of different jobs. They need to understand the language and related skills which are required for entry into various vocations.[2]

Rehabilitation counselors are often confronted with young deaf persons who are not yet mature enough for independent living or able to hold a job. It would appear that the extent of this problem could be reduced through coordination of work-study programs by rehabilitation agencies and secondary schools. In such programs students could spent part of the school day in on-the-job-training or paid employment. There are certain advantages to programs in which a junior or senior lives away from the school and is in employment for at least one semester before he graduates from high school. The actual work experience and on-the-job training in a somewhat protected work environment can help the student in developing self-confidence and appropriate job behavior. Such a program also offers a trial experience in independent living.

Educators and rehabilitation agencies must work with students before they are seniors in providing insight into the things most employers will expect from their workers. Things such as how to look for a job, how to complete an application form, how to behave in a job interview, and how to open a savings or checking account, etc., should be taught to every student at the secondary school level.

I would encourage you to explore the possibilities of developing a cooperative program with vocational rehabilitation whereby a rehabilitation counselor of the deaf could be housed at the secondary school. Such a counselor could help initiate a vocational exploration sequence fairly early through an introduction to job areas, an establishment of work attitudes, and an assessment of the student's potential skills and interests. A special vocational rehabilitation counselor for the deaf could begin planning early with students, parents, and other vocational rehabilitation counselors who will work with the student after he graduates.

Postsecondary training and adult education

The expanding number of special postsecondary programs has increased the number of potential careers available to deaf students. A Guide to College/Career Programs for Deaf Students describes 27 postsecondary college programs for deaf students. (The number of such programs has increased since this guide was published in 1973.)

The growth of postsecondary programs has been stimulated by rsources made available through the Vocational Educational Amendments of 1968 and Expansion and Innovation Funds from the Rehabilitation Services Administration.

As was discussed earlier, the largest number of deaf workers are in manufacturing type jobs where manual skills are utilized. Automation is reducing the jobs requiring manual skills and replacing them with jobs which require more academic or technical education.

Unless adult educational programs are available to many deaf workers, they will be forced to settle for lesser jobs where underemployment may be even more pronounced.

---

[2] Rose, Ed. "Career and Job Development," Fourth Annual Regional Institute on Rehabilitation of the Deaf, Greensboro 1974.

Vocational rehabilitation counselors with the deaf

Historically, a major problem in extending vocational rehabilitation services to deaf people, especially those with limited language skills, has been the absence of trained personnel who are knowledgeable about deafness. It is imperative that a vocational rehabilitation counselor be able to effectively communicate with a deaf person if he is able to understand the latter's needs.

The rehabilitation counselor of the deaf is a comparatively newcomer to the professional ranks of counseling. Short term training programs in deafness rehabilitation have emerged only in the last decade. These programs have helped prepare counselors to deal constructively with problems of deaf people; however, the majority of counselors of the deaf or vocational rehabilitation counselors in other areas have had little preparation in job development and placement strategies. In fact, some counselors have negative feelings about placement for a number of different reasons. A few are unsure about the role of placement in their jobs. Many are anxious simply because they do not know how to do job placement. Others feel that there are barriers to placement because of excessive work loads, paper work, and lack of information on jobs, occupations, and job vacancies.

Vocational rehabilitation counselors of the deaf have indicated that many of their problems in trying to expand job opportunities for the deaf are caused by their deaf clients' inadequacies. These have been categorized under the following major problems: [3]

1. Lack of knowledge about the "world of work."
2. Inadequate academic and vocational training.
3. Lack of marketable skills.
4. Lack of self-sufficiency.

Rehabilitation services to deaf people must be highly individualized. The rehabilitation program is designed by a counselor and a client to meet individual needs. Very few programs are the same; however, they all have as their final objective, employment for the individual client.

In order to achieve the overall goal of placement into competitive employment, three sets of conditions must occur simultaneously:

(*a*) Jobs must be available.

(*b*) Clients must be ready, willing, and able to work.

(*c*) Clients and employers must know about and be willing to establish a relationship with each other.

Although the availability of jobs is dependent upon the economic health of the community and nation, a counselor for the deaf should not use unemployment statistics as a rationalization why his clients cannot be placed. Even in the worst of times, some new jobs are being created and there is some turnover of employees.

The decision as to whether a client is ready for employment should be made as early as the rehabilitation process as possible. Experience has shown that employers will hire those who:

1. Have the basic skills required for a job.
2. Have demonstrated an interest in working.
3. Can get to the job.
4. Have an understanding of what to expect on the job.[4]

---

[3] Atelsek, F. and Mackin, E., "Diversifying Job Opportunities for the Adult Deaf," Final report of SRS 14-P-44083-3/3-02, December, 1971.

[4] "Placement of the Severely Handicapped." West Virginia University (will be published in November, 1976, as a topic of the Issues on Rehabilitation Institute).

In the final analysis, it is the employer who must decide that a deaf person has the ability to do the work and wants to hire the client; and it is the client who must decide that he wants to work and is willing to work for the employer.

At present, the counselor is in the middle between the client and the employer. In order to adequately serve his client through having access to a variety of employers, he must also perform a service to the employer by being a source of workers who meet employers' needs. Establishing this two-way rapport is difficult, and it is a rare counselor who feels adequate doing both.

Employers' attitudes

What do employers think about hiring deaf people? The majority of employers have probably not given any thought to hiring deaf people. If they do think about it they often have some reservations which may or may not be realistic. Some of the common concerns are:

What can the deaf worker really do?

The counselor of the deaf must keep the emphasis on the deaf job seeker's capabilities. He must be prepared to give evidence of what the deaf client can do by describing the latter's past experience and training.

How will the deaf employee communicate adequately with his supervisor?

The type of communication employed by deaf workers will vary depending upon their communication and language skills. The deaf worker with some residual hearing who has above-average skills in speech reading and intelligible speech is often able to communicate on a one-to-one basis with little difficulty; however, communication via note seems to be reported as the way that half of deaf workers communicate with their supervisors or co-workers. If the client has limited language and communicative ability, gesture and demonstration will be required. Should the employer already have a deaf worker, it is likely that he will rely upon the deaf employee's assistance to break in the new employee.

Is the deaf person able to adapt to different job settings?

This again will vary with the individual. Some deaf clients can adjust to a different work setting with a minimum of difficulty after they have been provided written instructions or the new assignment is demonstrated. Some changes in job tasks will require training of a more complex nature which may necessitate the use of an interpreter or help from a deaf employee who can teach a fellow deaf worker the new process.

It is important that vocational rehabilitation counselors explain that interpreter services can be provided during initial job placement, on-the-job training, and possibly during job retraining.

How will the deaf worker get along with others?

This usually is not a problem. Many employees learn fingerspelling in an effort to communicate better with deaf co-workers. Naturally, personalities and characteristics of deaf workers vary widely. However, some deaf employees have exhibited personal characteristics which are often a negative influence on advancement within the company or on the hiring of other deaf employees. Some of these problems are: not calling in when absent; not taking the job, supervisor, or job instructions seriously; constant talking or socializing on the job; bickering over petty differences in pay, job descriptions, and status symbols.[8]

A vocational rehabilitation counselor probably should refrain from referring clients with serious personality problems if the employer has never hired a deaf person. If the counselor elects to refer a deaf client in such situations, he probably should be honest with the employer but, at the same time, try not to over-emphasize the negative. Sometimes the counselor can provide information about the client which will help the supervisor to better understand the deaf worker.

Many vocational rehabilitation counselors stress the fact that they are available to iron out problems that may arise. Some counselors often give potential employers the names of other companies which have successfully utilized deaf workers in similar job settings.

In addition to the above concerns, vocational rehabilitation counselors of the deaf often cite other employer reservations such as:

(1) Feeling that hiring deaf workers increased insurance costs.

(2) Inability of the deaf workers to hear if machinery is functioning properly.

(3) Feel that deafness would create a safety hazard.

(4) Feel that deaf person's ability to advance in the company is limited.

Vocational Rehabilitation Act of 1973

Before I conclude my remarks, I would like to briefly comment on several provisions of the Vocational Rehabilitation Act of 1973 which may have implications for placement of deaf people.

Section 503 of this Act says that any company doing business with the Federal Government of more than $2,500 a year will have in their contract a statement of affirmative action to employ handicapped people.

This provision offers an excellent opportunity for counselors of the deaf to consult with employers who come under this provision of the act about how the counselor can serve as a source of referrals for deaf people seeking employment.

Schools for the deaf and vocational rehabilitation services should plan workshops designed to educate employers about deafness. Discussions related to some of the concerns of employers in hiring deaf persons such as communications, safety, and insurance could help provide them with a better understanding of these areas and, thereby, promote employment of deaf people.

Section 504 states that no qualified handicapped person can be discriminated against in any program receiving federal money. This provision amounts to the Civil Rights Act for the Handicapped.

The act of 1973 places major emphasis on services for individuals who have the most severe handicaps. Most deaf persons are severely handicapped. Consequently, this disability is among those which have some priority for expanded service delivery, research, demonstration, and training activity.

---

[8] Craig, W. N. and Silver, N. H. "Examination of Selected Employment Problems of the Deaf." American Annals of the Deaf, September, 1966.

The act also places emphasis on more involvement of the client in the planning of his rehabilitation program. If the counselor is to involve the client in joint-planning, he must be able to communicate with him. Perhaps this will add weight to the expansion of counselors who have had special training in working with deaf people.

The act encourages the provision of telephone communications devices for deaf and severely hearing impaired clients such as specially equipped teletypewriters, etc., in those cases where the use of a telephone broadens their potentials for employment. This provision should help to open doors for placement of deaf people in professional and managerial occupations.

Summary

In summary, it is my belief that the following are keys in promoting placement and new careers of deaf people:

1. The career education concept must permeate the various curricula in the schools of the deaf.
2. Work-study and on-the-job training programs must be established in schools of the deaf.
3. Postsecondary training opportunities and adult education programs for the deaf must be expanded.
4. Special counselors who have received training in job development as well as in communication skills are essential.
5. Counselors of the deaf and administrators of rehabilitation service programs must focus more attention on educating employers regarding the potential for the employment of deaf people.

TIMES HAVE CHANGED

Henry Warner, Assistant Regional Representative for Rehabilitation, Atlanta Regional Office, Rehabilitation Services Administration, Atlanta, Ga.

Employment: That's a by-word for many people today in our country—the school graduate, the factory worker, the black youth and the middle aged executive. Many are seeking to retain their employment or to find work.

Handicapped persons must compete in this job market also. For the deaf man or woman competition for employment is indeed keen when compared to his counterpart 30 to 40 years ago. Vocational/technical schools and junior colleges have made skill training available to the general public. The deaf man's edge in obtaining skill training has substantially diminished. Secondly, today's residential school graduate is more likely to be more severely impaired and/or multiply handicapped.

Recently there has been much discussion over the status of our economy: inflation, recession, taxation, etc. The effect of our economy on employment is of course a prime concern for vocational rehabilitation programs. I thought I would share with you some of the concerns being expressed from various resources concerning our projected future and how this may affect job opportunities for deaf people.

Social/Economist, Dean Albert Rose, University of Toronto, speaking at the IARF meeting this last month discussed some areas of social and economic trends and their possible impact.

1. Inflation will continue. It will erode the value of our monetary system.

2. Technology—will threaten unskilled and semi-skilled employment opportunities.

3. The population of the world will approximately double in this century to 6 billion people.

4. The effects of these trends will tend to result in a threat of our capacity to care for others.

5. Our society will change from a child centered to an aging society.

6. There will be a further urbanization of our country so that by 1990 only 6 percent of our population would be estimated living in rural areas. 80 percent of the U.S. population will live in 250 metropolitan areas.

Some implications for Vocational Rehabilitation that Dr. Rose outlined were: (1) A severe struggle for VR program is competing with other domestic programs for funding, (2) Continued high unemployment with a move to guaranteed annual income, (3) Equality through non-discrimination, (4) Housing shortages. Fortune Magazine in their June 1975 issue indicates the U.S. will be afflicted with unpleasantly high rates of unemployment for the rest of the 1970's. Unemployment is anticiapted to remain above 6 percent the rest of this decade. The following abstracted figures from Fortune indicate percentages of decline in employment by industry:

Highest Unemployment	Lowest Unemployment
19 percent: Furniture, Lumber, Rubber and plastics, Textiles, and Electrical equipment.	1 percent: Financial, insurance, Wholesale and retail trade, Printing and publishing, Food and Petroleum and Coal Production.
16 percent: Contract construction.	5 percent: Ordnance.

At the end of the decade the problem of reducing the unemployment rate will begin to get easier as the growth rate of the labor force tapers off. Most studies indicate greater job opportunities will be in Service areas.

It seems that we in rehabilitation are being faced with ever greater challenges to assist severely handicapped persons to compete in the world work. We are being pressed to assist the more severely disabled on a priority basis at the same time to refine our system of services to be increasingly effective, cost beneficial, and to have measured accountability. Since Vocational Rehabilitation is directed to assist handicapped people to employment, what is it that means successful employment of deaf persons.

Geno Vescovi in January 1973 of JRD listed what are some important factors that are recognized by Rehab practitioners related to successful employment of deaf persons: These I believe have meaning for the character and type of evaluation and rehabilitation services deaf people should receive.

1. *Communication.*—The ability of the deaf worker to make known his wants, thoughts, and feelings to his supervisors, co-workers, and superiors, in effect, to get the message across rather than dwell on the method of doing so.

2. *Interpersonal Relations.*—The ability to not just "get along" with co-workers, supervisors, foreman, etc., but to engage in wholesome "give and take" with them.

3. *Pride.*—In one's own technical skills that get the job done right; in one's competence; in one's ability to hold one's own in the inevitable competition.

4. *Self Acceptance.*—To know sufficiently well one's work strengths and limits and to order one's working goals around this realization.

5. *Identity.*—To try to be oneself fully without the bother of pretending that one can "hear just like everyone else."

6. *Intelligence.*—Enough to understand what non-deaf people at work don't know about deafness or the deaf.

7. *Tolerance, Strength, and Perseverance.*—The emotional strength to accept and deal firmly and positively with the misunderstanding of one's motives and behavior, with prejudice and bias, and with outright rejection.

8. *Self Concept.*—To be convinced of one's worthiness; that one is needed and useful to others as well as to oneself.

I believe we should not only strive to identify the extent those characteristics are expressed by deaf persons in evaluation, but to consciously build up the deaf person's skills so they may be expressed in a positive manner. These above factors can be used as measures of a deaf client's progress to meeting a level of employability.

Here are some concerns for career planning and job placement I have listed—maybe you have some others to add.

That the future job market will require:

1. That deaf people will need better preparation for entering the employment market.
2. Career planning should take into consideration industries most likely to have stable employment.
3. Consideration of purposeful long term sheltered employment systematically developed for substantial gainful employment.
4. That forming vocational training programs for the deaf be analyzed carefully; wage rates of occupations both locally and nationally should bear important consideration.
5. To be competitive, deaf persons have national and local centers for data exchange of employment opportunities.
6. That deaf people become more aggressive in utilizing the provisions of Title V of the Rehabilitation Act of '73 requiring equal employment opportunity for handicapped individuals.

The challenge is with us for the future—we cannot turn away. Deaf persons will need more and improved services by education and vocational rehabilitation if they are going to compete effectively. Successful employment for deaf people will depend to a greater extent on our ability to provide improved rehabilitation services.

ENGLISH SKILLS ASSESSMENT AND PROGRAM PLANNING FOR N.T.I.D. STUDENTS

Gerard G. Walter, Ed.D., Research Associate, English Department, Division of Communication Programs, National Technical Institute for the Deaf, Rochester, N.Y.

Introduction

The evaluation of deaf students' academic skills has consistently revealed that English skills are related to the general educational re-

1965; Trybus and Buchanan, 1974). Since English related to academic achievement in our society, the English skills of post-secondary deaf students cannot be neglected. One problem, however, that has pervaded education of the deaf is evaluating English skills in a valid and reliable manner. The interactions between word knowledge, reading comprehension skills, and knowledge of syntactical structures must be taken into account. Assessment must be aimed toward evaluation that will allow for the individual treatment of a student depending upon the interactions of the above three years. An adequate assessment program, then, must be linked directly with a curricular structure that will assist in remediation of individual student problems. The purpose of this paper is to describe the tie between English assessment and the type of remediation provided students at the National Technical Institute for the Deaf.

Performance evaluation

That there exist no adequate measures for the evaluation of English skills of deaf students in the 18 to 24 age range need not be elaborated. At NTID, we are currently working on the development of a set of evaluation materials. However, until the developmental work is complete, NTID is utilizing the California Reading Test, junior high level, (Tiegs and Clark, 1963) to measure vocabulary and reading comprehension skills. Grammatical performance in written language is assessed by evaluating original written compositions on a five point scale.

The vocabulary skills of NTID students are evaluated using the vocabulary part of the California Reading Test, junior high level. The vocabulary section of the test is composed of 60 items, each of which consists of a key word, the word to be selected and three distractors. The student must choose the word that means the opposite of the key word. The test, as a whole, is divided into four subsections. The first three sections are divided among the principal areas of school curriculum: mathematics vocabulary, science vocabulary, and social science vocabulary. The fourth section of the test provides a measure of general reading vocabulary. On the average, NTID students score a grade equivalent of 7.2 on this test, and as seen from Figure 1, the scores are distributed normally over the entire range of the test. One reason for choosing the California Test is that it seems to give a good distribution of scores within the range for which the test was developed (7th, 8th and 9th grade). Based on this distribution, we have developed descriptors that relate directly to various ranges of the grade equivalent scores. The ranges are also noted in Figure 1.

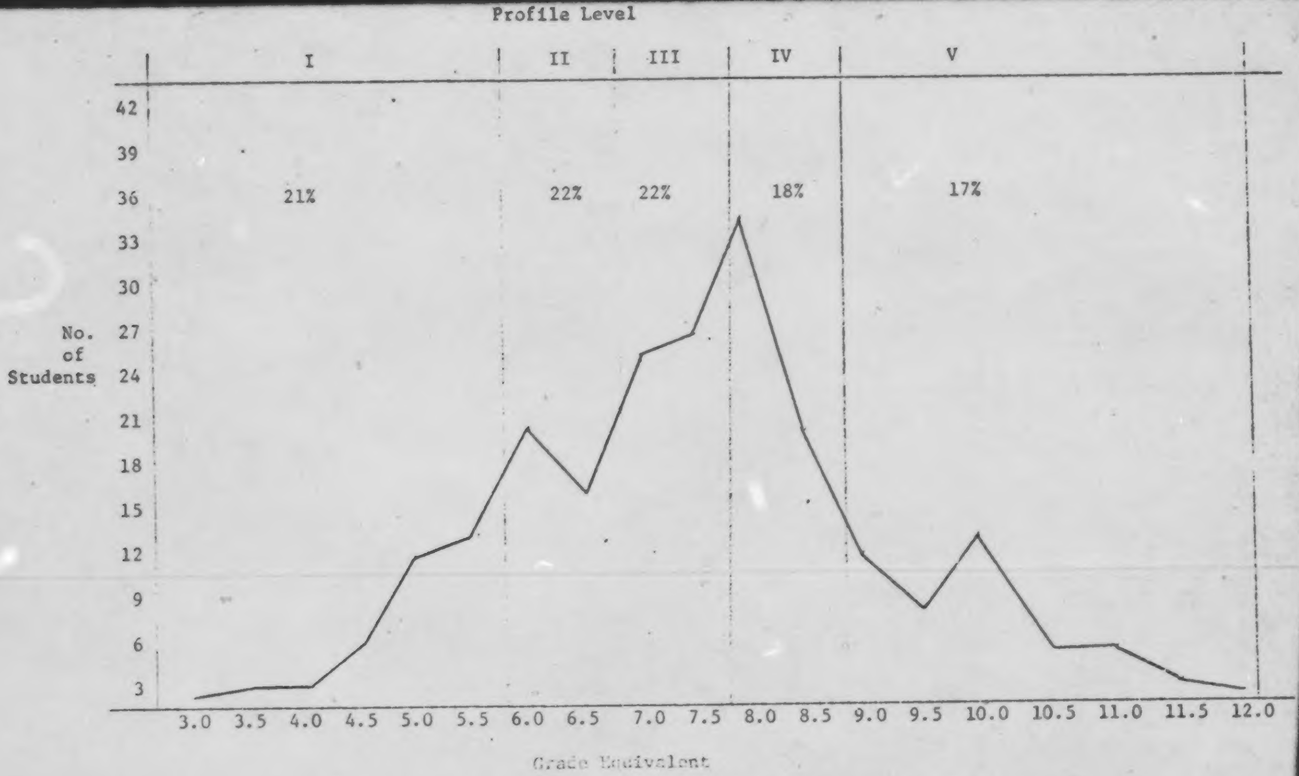


Figure 1.—Distribution of scores on the vocabulary section of the *California Reading Test* for students entering NTID in the summer of 1974. (N=236, Mean=7.2, Standard Direction=1.9).

to reveal the students' comprehension of what he reads and to enable a teacher to make a diagnosis of specific difficulties which cause problems in reading. The test is divided into three sections which sample seventeen different essential functional elements. Table 1 provides a categorization of the subparts of the reading test. The items of each reading comprehension section require the selection of the proper answer from a multiple choice format. Test items are concerned with a variety of topics. This variation in treatment tends to maintain interest as the examinee moves through the three sections. The results of the comprehension part of the California Reading Test place entering NTID students at an average grade equivalent of 8.4. Again, the data from this test distribute normally over the entire range for which the test was developed. This fact is important if the test is to be utilized for placement and evaluation of student progress. Figure 2 indicates the distributional characteristics for entering NTID students and the appropriate profile ratings as they relate to given grade equivalent levels. More will be said concerning these levels in a later part of this paper.

TABLE 1.—*Subscale analysis of the comprehension section of the California Reading Test.*[1]

A. Following directions:
    1. Simple choice.
    2. Definitions and directions.
    3. Math directions.
    4. Map directions.
B. Reference skills:
    1. Parts of book.
    2. Use of dictionary.
    3. Use of index.
    4. Table of contents.
    5. Reading a graph.
    6. Library classification.
    7. Selecting references.
    8. Reading a map.
C. Interpretation of material:
    1. Directly stated facts.
    2. Inferences.
    3. Topic or central idea.
    4. Organization of topics.
    5. Sequence of events.

[1] From the manual for the California Achievement Test, 1963, by E. W. Tiegs and Willis W. Clark.

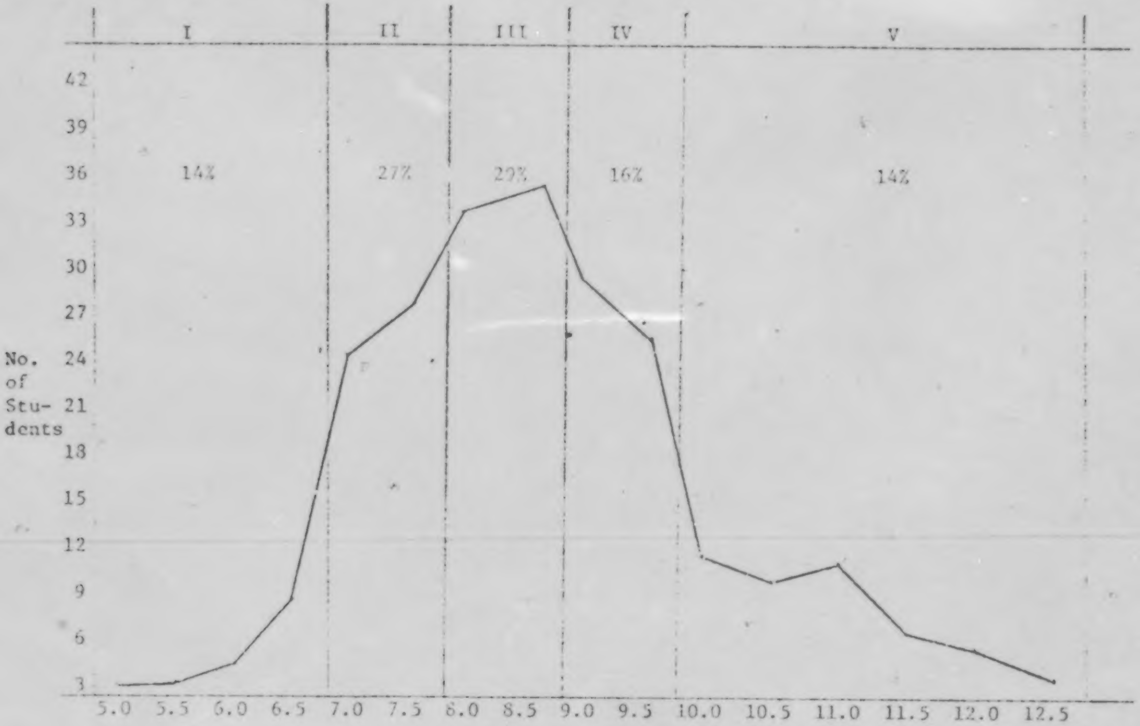


Figure 2.—Distribution of scores on the comprehensive section of the California reading test for students entering NTID in the summer of 1974 (N=236, Mean=8.4, Standard Deviation=1.3).

The NTID Written Language Test is utilized to assess written English grammatical proficiency. Student compositions are written in response to a short film about a cartoon character named Mr. Koumal (Sims, 1973). The first ten sentences of the composition are graded according to the scale listed in Table 2. It should be pointed out that this scale is an attempt to utilize type of error as a criterion for categorizing the correctness of the composition. This evaluation procedure has been tested, and we have been able to achieve an interjudge reliability approximating 0.90 after training. It must be stressed that the training of judges and the comparison of results (reliability evaluation) is important if this type of scaling is to be utilized. Prior to the fall of 1974, a subjective rating of written language intelligibility was utilized. We feel this new scale is superior to a subjective evaluation of a student's written composition. Figure 3 presents the distributional results of this evaluation for a group of students tested in the fall of 1974. As can be seen, there are 1 percent at the five level, 47 percent at the four level, 47 percent at the three level, and 5 percent at the two level, and none at the one level. The fact that NTID has no students at the one level is probably indicative of the type of student population attending the National Technical Institute for the Deaf. Few of our students, if any, write English in such a way that it is completely unintelligible to the reader.

TABLE 2.—*Summary of rules for rating written compositions of students at NTID.*[1]

Rating:	Rules
5	Sentences free of syntactical and semantical anomalies. Allowable errors include spelling, punctuation and sentences introduced by "and", "but" or "so" but containing complete clauses.
4	Sentences including bound morpheme, article, and/or phrase and clause series "and" errors. Examples of these are errors of minus s as a plural or possessive marker, minus ing as a progressive marker, and minus ed as a past marker.
3	Sentences that contain word choice errors of substitution, omission and/or addition errors not included in higher ratings. For example: He wanted to move at the country. (Preposition substitution) He jumped the ocean. (Omission of preposition).
2	Sentences that contain word order errors, omission of contentive phrases, or two clauses of which one is unintelligible, i.e., He poison bottle drank. (Word order error) The robber hold up. (Omission of contention phrase).
1	Sentences that cannot be classified in any of the above categories, and for which the intended meaning is indiscernable. The rater is unable to decipher clues as to what the sentence may mean without having seen the stimulus: i.e., Plant pollute city move. He was think the neck hung.

---

[1] A complete set of these rules is available through the Department of English, National Technical Institute for the Deaf, 1 Lomb Memorial Drive, Rochester, N.Y. 14623.

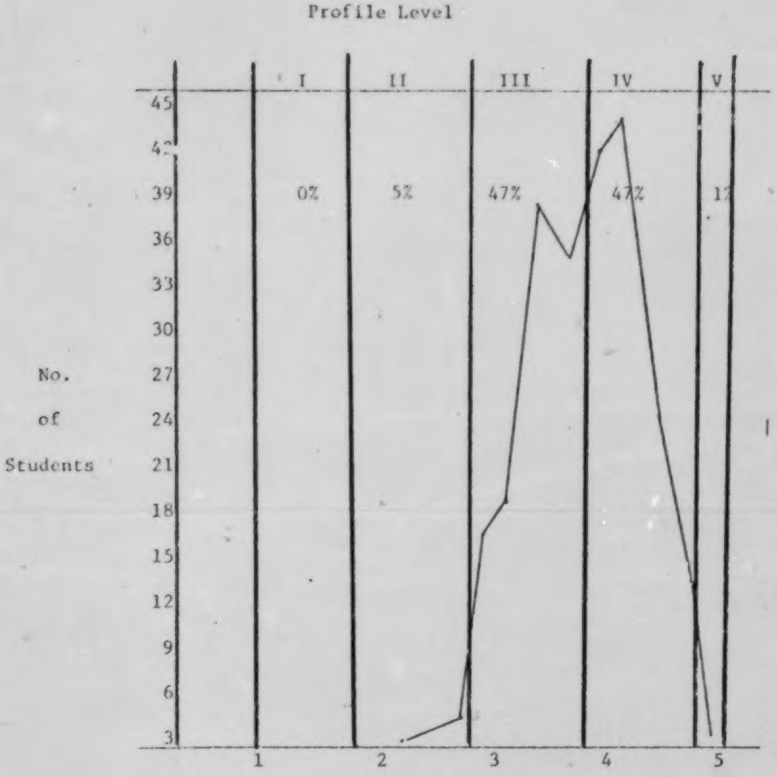


Figure 3.—Distribution of scores of the written responses of deaf students at NTID. (N=236, Mean=3.74, Standard Deviation=.54).

Diagnostic evaluation

It should be pointed out that only performance evaluation of NTID students has been presented above. While generalized evaluation is good for describing a student population and for placement in broad course levels, it is not adequate for the functioning of the teacher within the classroom or within a remediation setting where detailed information concerning ability levels must be known. Such detailed information in the English area requires that one be able to specify the level of receptive syntactic functioning of a deaf student and the types of expressive syntactic errors the deaf student is making. In addition, one must be able to define in detail the types of vocabulary words a student knows and how he knows the words—is he able to handle multiple meanings of vocabulary words, or to is to take place. A similar diagnostic approach must also be taken with regard to reading. What are the relationships of the syntactic structure, vocabulary level, cognitive functioning and the nature of the content on the reading comprehension and general English ability of the student? Figure 4 provides a model we are using at NTID to develop a diagnostic evaluation procedure for reading comprehension. This figure stresses the inter-relationship of the syntactic structures, vocabulary structures and the processing levels of the student. While Figure 4 does not indicate content, we must stress the importance of monitoring content within the experiential frame of reference of the student.

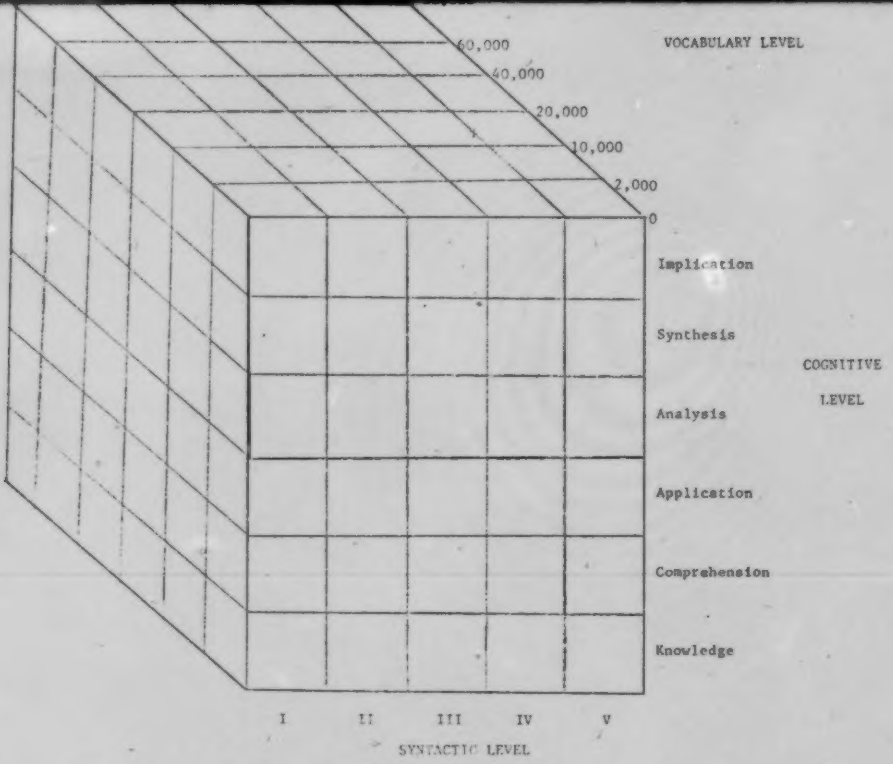

60,000
40,000
20,000
10,000
2,000
0
VOCABULARY LEVEL
Implication
Synthesis
Analysis
Application
Comprehension
Knowledge
COGNITIVE LEVEL
I
II
III
IV
V
SYNTACTIC LEVEL

Figure 4.—Model of a proposed diagnostic procedure for evaluating reading comprehension of NTID students.

Currently, we are working on the development of a method for evaluating the expressive written grammatical structures of deaf students. The objective of this project is to develop a system of tabulating the types of syntactic structures attempted by NTID students and the types of errors being made. In the reading area we are beginning experimentation on the development of a reading comprehension test built around the model discussed above. In vocabulary, a test is being generated from the American Heritage Word List (Carroll, 1973) that will sample words from the most frequently used words in the English language. It is our intent to be able to specify at what level, relative to frequency, an individual student begins having difficulty in word knowledge. It should be stressed that we are at a very early stage in the development of our diagnostic instruments, and that our model has been developed for remediation of young deaf adult language. Whether such a model could be applied to a developmental situation in an elementary or secondary school for the deaf I cannot say.

Planning student programs

As was indicated in the introduction to this paper, student program planning must be tied directly to student performance evaluation and diagnosis. In order to achieve this goal, the NTID English Department has divided its program into five levels. The five levels are presented in Table 3 with their accompanying performance specifications. We have found that few students vary more than one profile level in any one skill area. This is not surprising if one considers that language related skills are generally highly intercorrelated. The same seems to be true of NTID students. Our performance evaluation (as described above) permits us to initially place students who will receive treatment aimed at moving their skill levels to that of the next level. The curriculum at the 1, 2, and 3 levels affords basic syntactic and vocabulary development and stresses composition skills; while at the 4 and 5 level, it is related more generally to a student's major area of emphasis and to preparation for higher level liberal arts courses such as history, psychology, and literature. Table 4 provides more detail concerning the objectives and course content for each of the levels. We feel that these contents have assisted in the movement of students through our program. After three quarters of work with such evaluation and program planning, we have been able to move students on the average, approximately one grade level in vocabulary and reading in 30 weeks of study.

TABLE 3.—CRITERIA FOR COURSE PLACEMENT OF STUDENTS AT NTID

	Written language	California	
		Vocabulary	Comprehensive
Course level:			
1	1.00–2.80	to 5.9	to 6.9
2	2.81–3.30	6.0–6.9	7.0–7.9
3	3.31–3.80	7.0–7.9	8.0–8.9
4	3.81–4.30	8.0–8.9	9.0–9.9
5	4.31–4.80	9.0–9.9	10.0–10.9
No English required	4.81–5.00	10.0–up	11.0–up

TABLE 4.—DESCRIPTION OF COURSE LEVELS FOR ENGLISH AT NTID (1975-76)[1]

Course level—Substantive content	Emphasis	Sample linguistic structures	Sample sentences
1—American culture	Sentence	NP+VP+NP	John helps his father.
		NP+CopPh+NP	He was a gentleman.
		Which What +NP+VP+NP	What lion is growling?
2—Development of a technological society.	Paragraph	NP+Tense+do+Neg+V+NP	He doesn't wash his hands.
		NP+VP+NP+conj.+NP	John loved Mary Sue and Joan.
		NP+VP+by+NP	They were bored by the movie.
3—Content fundamental to technology.	Composition	NP+tense+(M)+(have+en) +be+V+en. (be+ing)	He will have been promoted.
		NP+VP+IP+NP	He likes to drink beer.
		NP+CopPh+Det+most adj.+ nominal.	He was the most important person.
4—Major technological area.	Vocabulary and text style of technology.	NP NP+CopPh+adj+prep+NP model	The civil war was vital at that time.
		What+tense+be +NP+rest have of VP	What has John learned?
		Complex sentences	The little boy who fell off his bike ran home in tears.
5—Contemporary English literature.	Reading and analysis of prose literature.	All structures of the English language.	

[1] Detailed descriptions of these courses can be obtained from Department of English, National Technical Institute for the Deaf, 1 Lomb Memorial Dr., Rochester, N.Y. 14623.

Summary

What has been stressed in this paper is that performance evaluation must be consistently tied with program planning for students. We strongly feel that this performance evaluation and program planning cannot occur on a once-a-year basis, but needs to occur regularly every 10 to 15 weeks within a student's development in association with appropriate program modification. We find that this procedure provides students not only with feedback concerning their progress and a way of measuring their progress but also provides a method of monitoring total program structure and curricular emphasis. No program of instruction is complete with only testing the students. Testing needs to be directed toward the student's course offerings and curricular content and toward evaluation of the strategies and methodologies utilized for delivering that course content.

REFERENCES

Carroll, John B., Davies, Peter, Richman, Barry. *The American Heritage Word Frequency Book.* N.Y., The American Heritage Publishing Co., Inc., (1971).

Kodman, Frank, Educational Status of Hard-of-Hearing Children in the Classroom, *Journal of Speech and Hearing Disorders* 28:297–99; August 1963.

Kowitz, Gerald T., and Levy, Lois E. Underachievement in Deaf Children. *American Annals of the Deaf* 110:414–18; May 1965.

Sims Productions, Inc. *Mr. Koumal;* Weston, Connecticut.

Tiegs, Ernest W., and Clark, Willis W. *California Achievement Tests Complete Battery, Junior High Level.* California Test Bureau, 1963.

Trybus, Raymond J., and Buchanon, Carol. *Studies in Achievement Testing, Hearing Impaired Students;* Gallaudet College, 1974.

THE ASSESSMENT OF AURAL AND ORAL SKILLS PROGRAM PLANNING FOR NTID STUDENTS

Joanne D. Subtelny, Ph. D., Chairperson, Speech Department, NTID
Division of Communication Programs, Rochester, N.Y.

Hearing assessment

Introduction.—The fundamental objective of the hearing assessment of NTID students is to determine how well the student can receive information under optimal conditions when audition is his only mode of information reception. To fulfill this objective, a performance measure of hearing, which is based completely upon the student's ability to discriminate speech, is obtained.

Performance evaluation.—The test battery is made up solely of the CID Everyday Sentence Lists (Davis and Silverman, 1970; pp. 492–5) and selected spondee words. There are ten CID sentence lists, each consisting of 10 sentences, including approximately 70 words. In each list there are 50 key words embedded within the sentences. Scoring is accomplished by determining the number and percentage of key words correctly identified.

The test material is presented at most comfortable loudness levels under headsets in a soundtreated environment to stimulate optimal conditions. The testing materials, procedures, and the system used for converting test scores into profile ratings for hearing discrimination have been described (Johnson, 1975; Sims, 1975).

To summarize briefly, a rating of 5 indicates the student correctly identified 90% to 100% of the 50 key words. A rating of 4 indicates correct identification of 50% to 88% of the key words. A rating of 3 indicates correct identification of 0% to 48% of the key words and/or a 50% level of recognition of 10 selected spondee words. A rating of 2 indicates correct responses on 15 or more of 20 items in a same-difference task, utilizing again, 10 selected spondee words. A rating of 1 indicates that less than 15 items were correctly identified in the same-difference task, again utilizing spondee words. To facilitate interpretation of the five receptive profile ratings for hearing discrimination, functional descriptors for each have been developed.

Figure 1 graphs the distribution of profile ratings for hearing discrimination derived for 248 students who entered NTID Summer 1974. As shown, approximately 15 percent of the students were profiled 1, indicating little or no ability to discriminate speech at any level. Thirty-four percent of the students were profiled 2, indicating that they had learned to utilize gross cues in speech to determine if two words are the same or different, but they could not recognize the word itself. Students in this group understand little of the content of a message. If students profiled 4 and 5 are combined, the data show that 25% of the students were able to understand most or all of the message utilizing audition.

Diagnostic evaluation.—The performance testing, limited to speech discrimination, defines how well a student can receive information auditorily under optimal conditions. There are, however, other pertinent clinical questions which require additional information. These questions have dictated: a careful evaluation of hearing performance with the aid, a comparison of aided performance with the performance defined under the optimal conditions of headphones, and puretone testing.

The puretone testing is employed to determine the amount and configuration of the loss. In a more positive reference, the puretone testing determines the student's residual hearing and his potential for hearing aid usage. Audiometric assessments over the past several years have shown that approximately 90% of the NTID students have some residual hearing (Moore, 1975). In 1974, however, only 25 percent of the entering students had developed enough discrimination to follow a spoken message. The experience of the audiologists at NTID suggests that speech discrimination skills of the students may be directly related to the individual's adjustment to and use of amplification. Operating on this basis, additional diagnostic information is accumulated relative to hearing aid use. In sum, each student is studied relative to skill in speech discrimination, the extent and configuration of hearing loss, and the amount of time a hearing aid is used.

It has been stated that the concepts of "High Frequency Cutoff" and "Amount of Hearing Loss" can be combined with the concept of "Hearing Aid Usage" to derive a formula for establishing predicted levels of discrimination and for determining students who might profit from auditory training to achieve a higher level of discrimination (Johnson, 1974). A great deal of work has been undertaken at NTID to combine these concepts for students who use hearing aids on an all or most of the time basis. This has been done to complete criterion data for predicting levels of discrimination for various patterns of hearing loss. The work involves analyzing a student's residual hearing on the basis of cutoff frequency and puretone average, calculated at 500, 1,000 and 2,000 Hz. Students are then grouped on the basis of residual hearing. The predicted discrimination levels for each grouping is established by studying the highest discrimination level at which a significant percentage of students in each category have been shown to function satisfactorily. Students with similar hearing characteristics who are functioning below this level are considered functioning below their predicted level, and thus become candidates for auditory training.

Planning student programs.—The disparity between the number of students with residual hearing and the number who can use their hearing effectively for communication indicates a need for auditory training in many instances (Moore, 1975). At NTID, such training is of primary importance to the total instructional program of communication.

The formula for identifying students who can profit from auditory training is generally applied to establish a student's priority for auditory training. Variables such as achieved language levels, site-of-lesion, age of onset, etiology, and age at which time amplification was first provided, probably should be considered and evaluated in the future.

In program planning, a great deal of effort goes into special evaluation of hearing aids, counseling, and designing individualized or group work to fit the student with appropriate amplification or to help a student adjust to amplification, thereby encouraging efficient use of a hearing aid on an all or most of the time basis.

At the present time, NTID Research Associates Whitehead and Jones are collaborating to develop and evaluate a diagnostic test of auditory perception which could be used to identify specific phonemes which can be correctly perceived when they appear within a simplified and controlled phonetic environment. This information will contribute toward a firmer criterion to predict auditory perceptual ability and candidacy for amplification.

This test is also needed to evaluate performance before and after auditory training. It is reasonable to assume that students will differ in response to auditory training with some of the differences attributable to variations in the extent and configuration of the student's hearing loss. From a clinical viewpoint, improvement or lack of improvement in auditory perception of phonemes as a consequence of auditory training must be studied relative to several factors, one of which definitely must be residual hearing. Such study eventually would result in more accurate and confident identification of students who can and will benefit from auditory training.

Speech therapists and instructors in speechreading also have a vested interest in the development and use of the diagnostic test of auditory perception. If the speech therapist knows exactly which sounds can be perceived, this information can be compared with the accuracy of the student's speech sound production. Following this procedure, the therapist should be in a much better position to select reasonable phoneme targets for correction and achieve faster progress in therapy. Similarly, training in speechreading might reasonably become more directly related to individualized need if the instructor knows precisely how much of the phonetic message is being accurately perceived by ear. Instruction and practice might then concentrate on the missing segments to be mastered through visual perception.

Summary.—The utility of information derived from a diagnostic test of auditory perception (phoneme discrimination) has been discussed to illustrate the interdependence of varied aspects of communication training as it has evolved within the NTID environment, and to explain, within the broad perspective, the value of diagnostic testing in planning programs of instruction.

Speech assessment

Introduction.—The basic objective of the speech performance testing is to determine the speaker's relative competence in making himself understood when speech is his only mode of communication. Intelligibility of speech is considered the most practical single index to apply in assessment. Operating on this premise, ratings of speech intelligibility are obtained for each student.

Performance evaluation.—The standard procedure followed in implementing speech assessment involves: (1) familiarizing the student with a continuous speech passage (Fairbanks, 1960; p. 127); (2) tape recording of speech while reading this passage; (3) playback of the recording to a panel of 5 speech pathologists for rating of intelligibility; and (4) averaging the five ratings to establish a single profile rating of intelligibility for each student.

The scale developed for ratings is similar to others described, in the sense that a rating of 5 indicates near normal performance, or completely intelligible speech. A rating of 1 designates a poor level of performance, or speech which cannot be understood. The intervening ratings of 2, 3, and 4 designate progressive gradations between the extremes of unintelligible and completely intelligble speech.

Studies have been undertaken to evaluate other variables which may influence the intelligibility assessment. The 'other variables' investigated include: the speaker's competence in spoken English (oral reading as opposed to self-generated conversational speech), the listener's familiarity with tho speech of the deaf (inexperienced as opposed to experienced listeners), and the effect of visual cues upon the reception of speech produced by the deaf (tape recorded conversational speech samples as opposed to conversational speech produced in face-to-face confrontation).

Statistically, all three variables have a significant effect upon the intelligibility assessment. Oral reading visual cues of the speaker and past experience in listening to deaf speech have the effect of inflating the intelligibility rating. Compositely, these studies have permitted a more accurate and confident interpretation of the ratings of speech intelligibility for academic, social and vocational purposes.

The results of intelligibility assessment for 257 students who entered NTID Summer 1974 are shown in Figure 3. Seventeen percent of the students had completely intelligible speech, profiled 5. Twenty-seven percent were rated 4, indicating they were intelligible with the exception of a few words. At the lower end of the scale, 35% of the students were assessed as completely or almost completely unintelligible during oral reading, as indicated by ratings of 1 or 2.

Diagnostic evaluation.—Diagnostic speech testing is undertaken: to identify specific problems so that a reasonable course of training can be formulated; to provide detailed information so that progress or regression of speech over the long term can be ascertained; and to check the validity and reliability of the intelligibility rating. Diagnostic testing also provides data which may be studied relative to other communication parameters, such as phoneme perception and lipreading skill.

The diagnostic procedure involves a detailed speech and voice analysis, a test of articulation, and completion of an attitudinal questionnaire which was designed to appraise the student's motivation to improve speech and his attitude toward individualized speech instruction.

In the speech and voice analysis, various parameters are rated again on 5-point scales. These include: the intelligibility of conversational speech in face-to-face confrontation, pitch register and control, loudness, control of loudness, rate of syllable articulation, control of air expenditure during speech, and prosodic features. Deviant voice qualities are also identified and rated relative to degree of deviation. The speaker's preferred mode of communication and use of amplification are also recorded, to assist in formulating a prognosis for speech improvement. This type of analysis has helped identify specific needs in planning the training for NTID students. For example, 13% of the students are found to have major problems related to voice quality. These findings have encouraged the development of a system to establish priorities for individualized speech training.

Planning student programs.—The speech and voice analysis, articulation test, and attitudinal questionnaire have proved to adequately fulfill specific needs at NTID. This individualized information is considered in conjunction with other data relative to the student's auditory function and functional usage of English before establishing prognosis for improvement in speech, and before establishing his priority for receiving individualized speech instruction.

Priority levels for individual speech training are established to make certain that students with potential to achieve a functional level of oral communication receive adequate training which is scheduled at the most propitious time during their residency at NTID.

There undoubtedly are multiple and inter-related factors which define potential to improve speech. Some of these seem to involve the student's attitudes and motivation for an oral/aural mode of communication; auditory receptive skill; and current status of speech.

Past study at NTID has shown that attitudes and motivation to improve speech are significantly influenced by the student's present status in speech.

Positive attitudes toward speech training are influenced by varied communication skills in speech, lipreading and hearing, as defined at the time of entering NTID.

For mnay students, the fastest way up or down the ladder of success in oral communication is via the hearing aid. For this basic reason, priorities for hearing aid fitting and auditory training always take precedence over speech therapy. In speech therapy, a difficult task should not be made more complex by working without the benefit of amplification when the student has the potential for successful hearing aid fitting, or when he is not wearing the aid he has.

To pursue the question of what constitutes a functional level, the relationships between articulation scores and intelligibility rating have been studied. In Figure 4, the means for articulation error are graphed for students grouped by respective speech intelligibility ratings. In general, students profiled 5 in speech had a mean articulation error of 11 percent, with a standard deviation of 7 percent. It is apparent that this group of very intelligible students have achieved a functional level of speech. It is therefore concluded that students with articulation errors of less than 20 percent are functionally adequate in speech. Such students, therefore, have no priority for individualized speech training.

The priority levels for speech training are defined primarily by articulation status, voice characteristics and hearing. The first 5 priority levels include students who have the same relative status in articulation with errors ranging from 20 percent to 45 percent. Levels 1 through 3 are differentiated by auditory function. Priority levels 4 and 5 are differentiated from the others by the presence of a pitch or voice quality problem. These first 5 priority levels identify the target group for speech therapy, which includes approximately 40 percent of the incoming students. This group excludes students profiled 5 in speech, students falling in the lower half of the profile 2, and almost all students profiled 1 in speech. Higher priority levels 6, 7 and 8 progressively include students with a higher incidence of articulatory errors with and without associated problems of voice.

To define prority levels for speech training, the student's speech skill at entry and the amount of anticipated gain in therapy per quarter are considered, relative to the accepted level defining functional adequacy. From past work (Orlando, 1975), it seems reasonable to expect an average reduction of error of 10 percent per quarter (10 weeks), if individualized therapy is offered two hours per week. Using this figure as an approximate gauge, a semi-intelligible student, profiled 3, with an articulatory error of perhaps 40 percent, could be expected to approach a functional level of speech (20 percent error) if he receives two consecutive quarters of speech therapy. Under these conditions, this hypothetical student would be given a good priority level for speech training. On the other hand, if the student had a higher incidence of error, or if his speech problem is compounded by an aberrant voice quality or pitch problem, a longer period of training would be required to achieve functional speech skill—hence, he would have a less favorable priority level.

Summary.—The basic underlying assumption in establishing priority levels for individualized speech training is as follows. If a functional level of speech is not achieved within the structured communication program before leaving NTID, the student probably will not use speech consistently enough to retain his skill and interest in oral communication. This assumption is based upon the concept that intelligible speech is reinforced in a positive manner—it is rewarded, and continued use is encouraged. Unintelligible speech generally receives negative reinforcement and continued effort to use oral communication is discouraged. Rewarded speech behavior serves as a powerful catalyst for the communication staff to work to increase current percentages of success in meeting the multiple and complex needs of NTID students within the existing constraints of time.

REFERENCES

Davis, H., and Silverman, S.R. *Hearing and Deafness*, 3rd Ed., New York: Holt, Rinehart and Winston, Inc., 1970.

Fairbanks, G. *Voice and Articulation Drillbook*, 2nd Ed.: New York: Harper and Row, Publishers, 1960.

Moore, E. M. Hearing Characteristics: Implications for Auditory Training and Hearing Aid Use. *Journal of the Academy of Rehabilitative Audiology*, 8, 1975 (In Press).

Orlando, N. Evidence of Success in Speech Training. *Journal of the Academy of Rehabilitative Audiology*, 8, 1975 (In Press).

Sims, D. G. The Validation of the CID Everyday Sentence Test for Use with the Severely Hearing Impaired. *Journal of the Academy of Rehabilitative Audiology*, 8, 1975 (In Press).

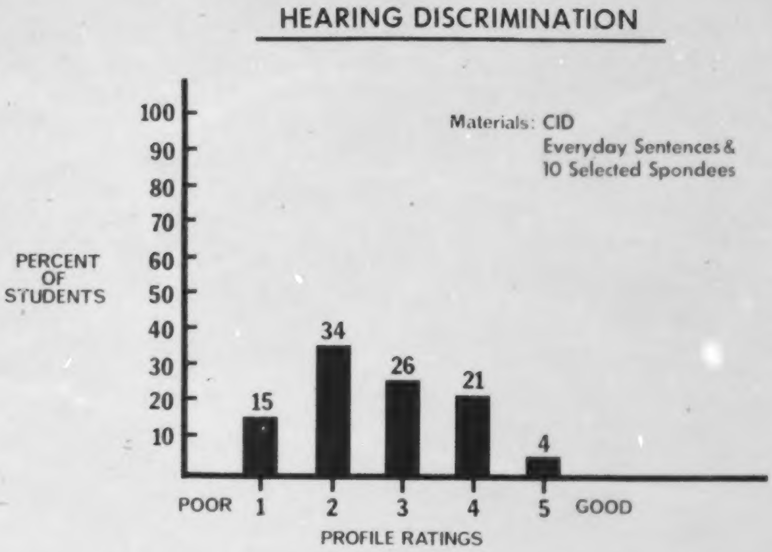


FIGURE 1.—Summary of results on tests of hearing discrimination for NTID students entering summer, 1974 (N=248).

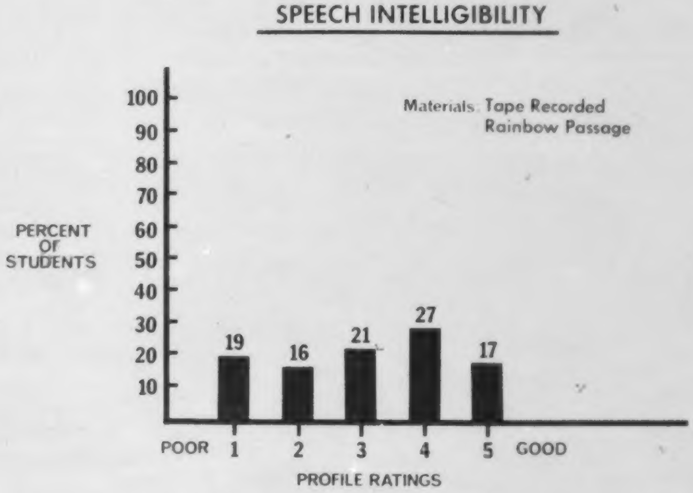


FIGURE 2.—Summary of ratings of speech intelligibility for NTID students entering summer, 1974 (N=257).

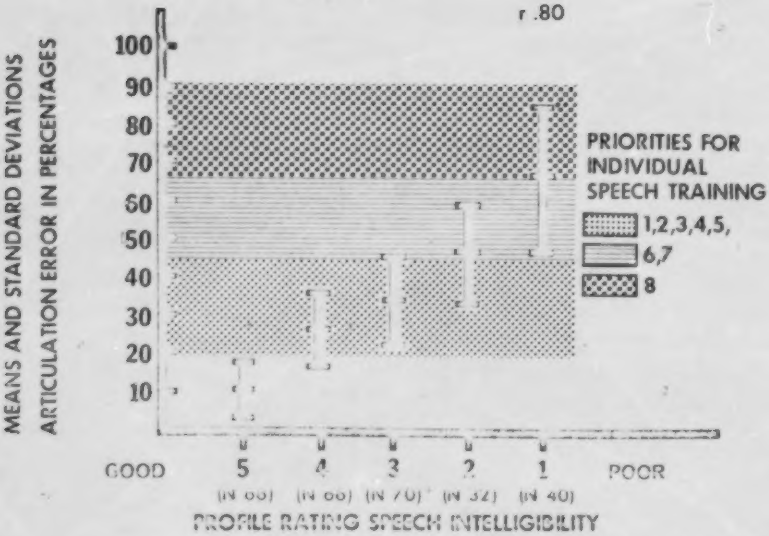


FIGURE 3.—Measures of articulation error for students grouped on the basis of profile rating (N=274).

MANUAL COMMUNICATION SKILLS ASSESSMENT AND PROGRAM PLANNING FOR NTID STUDENTS

Frank Caccamise, Ph. D., Chairperson, Manual Language Department, NTID Division of Communication Programs, Rochester, N.Y.

Introduction

There are two types of classroom communication environments which National Technical Institute for the Deaf (NTID) students generally experience at Rochester Institute of Technology (RIT). Within the College of NTID, instructors normally use simultaneous communication; that is, manual communication (signing and fingerspelling) and speaking simultaneously. For students who are cross-registered in other Colleges of RIT, instructors generally use an interpreter who signs, fingerspells, and mouths what the instructor is saying. Since a major objective of the Manual Language Department at NTID is to assist students in developing the communication skills required to receive information in the classroom environment, assessment of students' manual communication skills needs to take into account these two types of classroom communication environments. Therefore, assessment of NTID students' manual communication skills involves the following two communication parameters:

1. Manual reception.—Under optimum conditions, how well the student receives information when manual communication is the mode of information reception;

2. Simultaneous reception.—Under optimum conditions, how well the student receives information when the combination of listening, speechreading, and manual communication is the mode of information reception.

This assessment, which gives general communication skill levels of students (Performance Evaluation), should also provide the follow-up data required to plan individualized programs for those students needing communication instruction (Diagnostic Evaluation). Therefore, as is true with assessment of listening, speechreading, speech, written, and reading skills, assessment of manual communication skills needs to include Performance and Diagnostic Evaluations.

Performance evaluation

Manual reception.—NTID color film adaptations of CID Everyday Sentence Lists are used to assess manual receptive skills of students. Students are asked to write word for word what they see the person in the film sign and fingerspell. The person in the film does not use any lip movement. Scoring is based upon correct identification of 50 key-words in a test list of ten sentences with each sentence list containing a total of approximately 70 words. Most key words are signed. Each key-word has a value of two percent, and therefore, each test has a maximum score of one hundred percent. Students are tested in groups of 20–25, with test time averaging about fifteen minutes.

Based on percentage correct scores, students are assigned a communication profile rating on a 5-point scale, with a 5 rating being highest and a 1 rating lowest. Table 1 presents percentage ranges for each profile rating, along with concomitant functional descriptors, for deriving general manual receptive skills of students.

TABLE 1.—PROFILE RATINGS, PERCENTAGE RANGES AND FUNCTIONAL DESCRIPTORS FOR ASSESSMENT OF MANUAL RECEPTIVE ABILITY OF NTID STUDENTS

Profile rating	Percentage range	Functional descriptor
V	75–100	Student understands the complete message.
IV	54–74	Student understands most of the content of the message.
III	33–53	Student understands with difficulty about half of the message (understanding may improve with increased exposure).
II	11-32	Student understands little of the content of the message, but does understand a few isolated words or phrases.
I	0–10	Student cannot understand the message.

The results of tests for manual reception administered to 252 students entering NTID during the Summer Session, 1974, indicate 59 percent (profile ratings 4 and 5) of these entering students possessed a high degree of proficiency at receiving familiar information through manual communication, while 29 percent (profile ratings of 1 and 2) of these students were relatively unskilled in this mode of information reception. The remaining 12 percent (profile rating of 3) possessed enough skill in manual communication to receive some information, but would be expected to have difficulty in receiving everyday information through manual communication and presumably even more difficulty in a classroom environment.

Simultaneous reception.—As in the case of manual reception, NTID color film adaptations of CID Everyday Sentence Lists are used to assess simultaneous receptive skills of students. Scoring, profiling and test procedures are the same as for manual reception, except that the speaker says the word in each sentence, while simultaneously signing and/or fingerspelling them. The student is thus provided with listening, speechreading, signing, and fingerspelling cues for receiving information. The results of tests for simultaneous reception administered to 252 students entering NTID during the Summer Session, 1974, indicate approximately 91 percent (profile ratings 4 and 5) of these entering students possessed a high degree of proficiency in receiving familiar information through simultaneous communication. The remaining 9 percent (profile ratings of 1, 2, and 3) may be expected to have severe to extreme difficulty in receiving information through simultaneous oral and manual modes of expression.

Diagnostic evaluation

In order to plan individualized student programs based on specific needs, it is necessary to assess each communication skill parameter in isolation. Diagnostic evaluation for listening and speechreading skills of NTID students has been described by J. Subtelny in another paper published within these proceedings.

At present, a diagnostic test of manual reception is being developed, This test involves color videotapes of signing and fingerspelling. The two signing parts of this test are based on formal characteristics of American Sign Language (handshape, location, movement, and orientation). The three fingerspelling parts take into consideration both English spelling conventions and handshape characteristics of the manual alphabet.

The fingerspelling portion of this test involves a same-different paradigm divided into three parts, with parts arranged from easy (24 items), to medium difficulty (20 items), to most difficult (20 items). Judgment of degree of difficulty for same pairs was based on length (number of letters per word), while for different pairs judgment was based on length, the number of different letters per word, place of different letters within the word (initial, medial, and final), ordering of letters (same letters in both words, but different order), and expected confusability of the different letters themselves. For each of the fingerspelling parts of this test students are presented two fingerspelled words, and asked to judge if the words are the same or different. It is important to note that the test does not require students to read the fingerspelled sequences, but rather to identify the fingerspelled pairs as same or different.

The signing portion of the diagnostic test involves two parts, a same-different part (30 items) and a paired-associates part (20 items). The same-different part involves presentation of two "nonsense" signs, and students are asked to judge if the two signs are the same or different. Different pairs include signs which differ in terms of one or more of the sign characteristics of handshape, location, movement, and orientation. The paired associates part is designed to assess students' ability to learn and remember signs. A list of twenty nonsense signs, each paired with a printed word, are presented twice. Students are instructed to try to learn these pairs. Then the twenty signs are presented again, with each sign followed by an array of four words. The students' task is to choose from each array the word that was originally paired with the sign presented. Distractors within arrays include semantic confusers and sign formational characteristic confusers.

All students' responses for the manual diagnostic test involve marking an optical scanning answer sheet. For same-different tests there are two blanks to choose from, with one labeled "S" (same) and one "D" (different). For the paired associates test part there are four blanks labeled "A" through "D," which correspond to the four choices in each response array. Students are tested in groups of 20–25, with test time averaging approximately 40 minutes.

This diagnostic test was recently pilot tested on NTID students. Analysis of data collected in this piloting is expected to lead to some modifications of test items, and plans have been set to administer this revised test version to all students entering NTID during Summer Session, 1975.

Planning student programs

Development of a diagnostic test of receptive manual communication skills has only recently begun. When more fully developed, this test should permit us to better plan individualized communication programs based on each student's strengths and weaknesses. However, presently it is possible to identify those students who may be expected to have difficulty receiving information in the classroom environment, and help students plan programs accordingly.

The most critical need involves those students who have profile ratings of 3 or below on the performance test of simultaneous reception. As previously stated, these students may be expected to have severe to extreme difficulty in receiving information in the classroom environment.

Therefore, when these students are identified, steps must be taken immediately to provide them with instruction (language, speechreading, auditory training, manual communication), which will allow them to function in the classroom. The immediacy of this need cannot be over emphasized, since entering NTID students are expected to participate in a summer technical sampling program in which they are provided information about various career opportunities. Based on this information students are expected to select a career major by the end of the Summer Session, and to begin course work for this career in the Fall. To assist in meeting this immediate need, the Manual Language Department is responsible for offering an introductory course in simultaneous communications during the Summer Session. The curriculum for this course is presently being developed, and it is hoped that the diagnostic evaluation for manual communication will eventually enable us to strengthen this curriculum for individuals students. For the coming summer, plans have been made to place emphasis on developing students' skills in receiving information when manual communication is part of the method of information transmission. Planned for inclusion in the coming summer's curriculum are a core vocabulary for use in social situations, a core vocabulary based on terms used in the summer sampling program, guidelines for use of an interpreter in the classroom, and instruction on how to effectively receive information, when speech and manual communication are presented simultaneously.

Those students who score a profile rating of 4 or 5 on the performance test of simultaneous reception, but score a profile rating of 3 or below on the performance test of manual reception, may also benefit from the Summer Session introductory course in simultaneous communication. It is important to remember that communication performance testing is done under test conditions which are much more ideal than the average classroom environment. Also, the "Everyday" test sentences used for testing simultaneous reception may be expected to be familiar to most of the students being tested, while in the classroom environment students are often exposed to information which is unfamiliar to them. Therefore, some students who perform well on the test of simultaneous reception may, in fact, have difficulty receiving information in the classroom environment. In essence, it is possible that the receptive simultaneous test in its present form is not sensitive enough to distinguish among those students who will and will not have difficulty receiving information in classroom environments. The fact that approximately 35 percent of entering students have elected to take the introductory course in simultaneous communication (under its old title of "Introduction To Manual Communication") over the past two summers does suggest that students have possibly recognized a need which our receptive simultaneous test has not been sensitive enough to identify. Research projects are being planned at NTID, which will involve a comparison of how well students are able to receive information in classroom environments with how well they do on the performance test of simultaneous reception.

Curriculum for an intermediate simultaneous communication course is also being developed. Improvement of skills in receiving information is being stressed as in the introductory simultaneous course. Individualization of student programs based on academic major, as well as communication skill and language levels, is being emphasized in development of this curriculum. Instructors and interpreters are being asked to assist in identifying vocabulary for each academic major, and the existing signs for this vocabulary.

As curricula are refined for both the introductory and intermediate courses in simultaneous communication, audio-video tapes suitable for individual instruction will be developed. This development has been initiated, and is being carried out as a cooperative effort by the Manual Language Department, Interpreting Services Department, and the Office of Professional Development and Training at NTID. The latter two areas are responsible for manual communication training of interpreters and staff respectively. Therefore, cooperation among these three areas is essential if consistency of communication skills taught to students is to be achieved.

Summary

Assessment of NTID students' manual communication skills involves testing of manual receptive and simultaneous receptive abilities. The primary purposes of these assessments are to predict how well a student is able to receive information in the classroom, and to provide data for planning individualized instructional programs for students.

Results of communication assessment on 252 students entering NTID during Summer Session, 1974, indicate that 9 percent may be expected to have severe to extreme difficulty in receiving information through simultnaeous oral-manual modes of expression, while 41 percent lacked skills in receiving information through the manual mode of expression. The former group of students requires immediate instruction, which will help them to develop the communication skills needed to function in the classroom. An introductory course in simultaneous communication will be offered to help fill this immediate need. The latter group of students can also benefit from this course in terms of improving and strengthening their skills in receiving information transmitted through simultaneous oral-manual expressive modes.

An intermediate course in simultaneous communication will be offered as a follow-up to this introductory course. Both of these courses emphasize development of receptive communication skills, and are designed to meet individual student needs in terms of academic and social requirements.

Presently a diagnostic test of manual reception is being developed. The results of test administration should allow for better planning and individualization of student instruction based on each student's strengths and weaknesses.

RATIONAL PROGRAM CHANGE—WHY GRADUATE FOLLOWUP?

Jack R. Clarcq, Ph. D., Associate Dean for Technical Education Programs and Victor J. Maguran, M.S., Chairperson, Department of Occupational Liaison and Research, National Technical Institute for the Deaf, Rochester, N.Y.

Introduction

This paper will describe the relationship between follow-up of program graduates after completing a program of education and training and how such follow-up can be used to generate program changes. In order to describe the relationship between follow-up and change it is suggested that it is important for program planners and implementers to understand the need for feedback or follow-up information and how this relates to the overall program of education and training. To achieve this, this paper will 1) present considerations in designing a feedback system, 2) describe the process of follow-up and feedback used at the National Technical Institute for the Deaf, and 3) present early findings of NTID's graduate follow-up process.

Considerations in designing a feedback system

The effectiveness of educational programs supported by public monies and directed toward meeting the needs of various people in this country has been questioned by individuals and groups throughout history. Such groups have represented interests such as the taxpayer, the professional, and the governmental planner at the state and federal levels. Fundamentally, the question raised—Have such programs met the needs of the people they are designed to serve? As the competition for funds becomes more acute for programs supported by public monies it can be hypothesized that this question will be posed to program planners with increasing frequency. It is further suggested that the long term, if not short term, continuance of such programs will relate directly to the ability of program planners to document their answers to that fundamental question. Many programs have not been able to demonstrate that they have in fact impacted upon the people they are charged to serve. David F. Linowes in a recent volume entitled "Strategies for Survival" summarizes the state of the art succinctly when he states, "What is depressing is the discrepancy between the verbal responses and the social action needed to convert the rhetoric into simple acts of needs fulfillment." (*1*) Linowes continues, "How often in the past have we witnessed violent eruptions—in Watts, Newark, Attica, Kent State, and elsewhere—followed by well intentioned studies . . . followed by eloquently inspired promises and pronouncements regarding reform . . . followed by what? By little, if any, innovation that significantly changes the status quo. Is it any wonder the level of desperation continues to rise?" (*2*) What we are in fact witnessing is desperation—on the part of the clientele served and on the part of those who provide funds to support programs that attempt to impact upon human beings in some positive fashion.

Robert W. Sarnoff, Chairman of the Board of RCA, in a recent article points out that "the unprecedented combination of inflation and recession has escalated costs and weakened support for. . . . nonprofit companies." (*3*) Sarnoff adds ". . . I believe that the single most important factor in survival of . . . organizations will be the efficient handling of their resources. Unfortunately, many of them suffer from inexperienced or inept management and this is reflected in the abence of accurate balance sheets and ignorance of economical purchasing practices . . ." (*4*)

The writer suggests "training managers in practices that will stretch their resources, regularize their financies and solidify their sources of support, adding that, "Sound management practices are not solely the preserve of profit oriented business; they are essential to the health of any organized human activity."(*5*)

It can be said that those responsible for managing and implementing educational programs will be challenged in terms of the question—In what ways has your program met the needs of the individuals you are serving? Our individual and collective responses to this question will have a direct bearing on the future of programs and services. Planners must respond to this challenge by careful and deliberate efforts in the areas of program planning and evaluation. Those involved in education of the deaf are not isolated from this condition. We too must respond.

Our response must be constructed via sound program planning and evaluation. It is my opinion that only in this way will our programs sustain themselves and in fact if we cannot demonstrate that we have had a positive impact upon the population we have been charged with serving, then we should not continue to receive support.

A graduate feedback system must be considered as part of a larger process. This process (*6*) includes: (*1*) A clear definition and description of goals or ends; (*2*) identification of the unique characteristics of the students served; (*3*) identification of services and experiences necessary to achieve the goals and objectives; (*4*) development of a system to deliver services designed to support individuals in obtaining experiences; and (*5*) evaluation or feedback to determine if individuals have met the objectives and goals.

Each institution must be responsible for defining its own goals or ends—clear statements of what it hopes to accomplish for its students or population served. Many times program planners concentrate initially on the means or mechanics rather than on ends. It is suggested that this means/ends mentality be reversed and that we concentrate first on ends or goals. The goals of educational institutions will differ; depending on the nature of the individuals served and the institutional mission. However, each institution must define its goals; considering students and mission. Examples of goals include preparing students for post-secondary education, for work; for living in a modern technological society, etc. In defining the clientele served it is necessary to determine their distinctiveness in terms of interests, motivations, aptitudes, achievements, etc.

The third step in the developmental process is for program planers to determine what services and experiences are necessary to take students from where they are to where they must be to meet the institution's objectives, i.e., the ultimate criterion of program success. Examples of experiences which individuals generally need at the post-secondary level include:

1. those which develop understanding of self and of others;
2. those which develop an understanding of the world of work;
3. those which relate the educational (academic or vocational) environment to the world of work;
4. those which develop specific technical competencies;
5. those which develop social competence; and
6. those which develop communication competence.

The fourth step (but the one which is often placed first by many program planners) is to develop the system which will deliver services designed to provide or support individuals in obtaining the experiences they need. The last step relates to program evaluation or feedback to determine if in fact the programs and services have met the institutional goals and the needs of students. Program planners must develop criteria for evaluating the effectiveness and efficiency of their programs and program elements, design instruments and processes for collecting data, and develop procedures for reporting their findings to program managers and appropriate external publics.

Considerations in designing NTID's graduate feedback system

This section of the paper will address some of the general and primary considerations employed in developing a specific program of Feedback and Evaluation which maximizes the probability of rational program change. Where possible, specific references will be provided relating to the development of a program of feedback and evaluation at the National Technical Institute for the Deaf. It is hoped that the information presented will have application and merit beyond the National Technical Institute for the Deaf.

1. HISTORICAL SKETCH OF FEEDBACK AND EVALUATION

Feedback and evaluation programs are both new and old. Old from the perspective that educators and program planners have always sought to examine the effectiveness of their labor. However, the concepts of evaluation, as well as the method of evaluation have shifted considerably over the years. (7) Essentially, evaluation concepts have changed in relation to such issues as, who is to be evaluated, what is to be evaluated, and how evaluations are to be accomplished.

As previously alluded, as the public service movement grew, so have the demands to "justify" the expenditures made for these services. Evaluation represented a hope and a response to these demands. But as many of us know, early evaluative enterprises constituted little more than descriptions—counting and recounting of services rendered. Very little attention was given to the assessment of outcomes. Significant progress was made, however, through such people as Dr. Ralph Tyler, who laid the foundation for the evaluation movement as we know it today. Probably Tyler's major contribution was his insistence on defining goals, objectives, and programs in behavioral terms and making them the basis for instrument development and evaluation.(*8*) Further gains in program evaluation were made during the war years when wartime pressure made it impossible to train skilled workers with traditional methods. Consequently, novel methods had to be introduced and quickly evaluated in terms of effectiveness. More recently, one of the most significant events which advanced program evaluation was the introduction of Title I of the Elementary and Secondary Education Act of 1965. This program, started at almost the same time as the National Technical Institute for the Deaf required annual evaluations of special programs for disadvantaged children in terms of the effectiveness and efficiency. With this perspective, it is, therefore, easy to understand why the National Technical Institute for the Deaf's mission is so clearly spelled out and a program of feedback and evaluation mandated.

II. NTID'S FEEDBACK AND EVALUATION PROGRAM—CONCEPTUAL CONSIDERATIONS

As NTID initiated its pioneering effort to become the world's first postsecondary technical institute for the deaf, it was faced with several considerations and decisions with respect to keeping programs in harmony with the needs of students and prospective employers. Program evaluation was a fundamental issue and program planners were faced with such questions as "What should a feedback and evaluation program encompass? Who should be involved in the process? When should it be applied? How can it best be utilized in order to bring upon institutional reform and maintain institutional vitality?"

With respect to these questions, there can be no universal agreement however, the intent and spirit of developing a feedback and evaluation program at NTID was clear. As the process of developing a feedback and evaluation program because a reality, several characteristics of a Feedback and Evaluation program have evolved:

1. The primary purpose of the program is to provide information to program planners so valid and logical decisions can be made with respect to meeting the unique needs of the clients served.

2. That evaluation results are useful for program modification (program improvement) decisions, rather than solely for decisions of continuation or termination of programs.

3. That feedback and evaluation information should be provided in a timely manner so that program decisions can be made and program changes accomplished when necessary—not years after a change is called for.

4. That Feedback and Evaluation should be more than measurement—it should be evaluation that is, a human judgmental process and one that recognizes the Institute's broader and more complex responsibilities to the larger deaf community.

5. That a program of Feedback and Evaluation should be geared for long-term as well as short-term objectives and should, therefore not overreact to initial negative information.

6. Finally, the process of obtaining information through a feedback and evaluation process should attempt to meet appropriate criteria for such things as objectivity, validity, reliability, practicality, utility, and of course, ethical responsibility.

Naturally, some flexibility should occur in achieving these principles. However, in total, these principles appear indispensable to a really effective program of Feedback and Evaluation.

Obviously, there are many issues related to NTID's Feedback and Evaluation program that have not been resolved. The program is still young and its direction is still being set. It would appear that the program is neither purely summative nor formative in nature but perhaps a combination. The strategy of evaluating data will be comparative—judging results in comparison to other groups and, absolute—judging results in terms of a performance standard related to program objectives.

III. FUNCTIONS OF NTID'S FEEDBACK AND EVALUATION PROGRAM

As stated previously, the manifest purpose of NTID's program of feedback and evaluation is to ensure that the total set of programs and related services are in fact preparing students for meaningful roles and responsibilities in the "mainstream" of American business and industry. Therefore, two of the primary functions served by a feedback and evaluation system are decision-making and accountability. But what is accountability?

As we know, accountability is still a largely untested concept in the field of education, and there is little tradition to explain and support its application. A working definition of the term was, however, provided by Anderson et al (1975) in which accountability is said to represent "acceptance of responsibility for consequences by those to whom citizens have entrusted the public service of education." Such a definition applies, of course, not only to school systems but to any instructional program that happens to use public funds. Accountability acknowledges the public's right to know what actions have been taken in the schools it supports and how effective these actions have been. Further, this definition of accountability suggests that the "redress" implicit in the concept is more than the citizen's right to demand the imposition of penalties for failure in accomplishment. Rather, it suggests that educators should be required to redesign educational activity to achieve educational effectiveness and efficiency.*(9)*

However, Anderson et al indicated that accountability can be a very positive concept if it also includes parties to the "total system"—teachers, staff, administrators, and finally law makers. In his view, each level is responsible for making decisions and for the results of those decisions, and all elements in education systems are equally responsible for improving education within the constraints that society imposes. Administrators and legislators must authorize information systems and disseminate the data to teachers; and they are also to be held accountable for assisting teachers by providing in-service training, retraining, or any other corrective action that the evaluation has shown is necessary.*(10)*

In addition to accountability and decision making, NTID's feedback and evaluation program serves in a more general way to affect broader institutional change, materials evaluation, instructional techniques, staff selection and recruitment, accreditation and many other functions.

IV. LESS APPARENT CONSIDERATIONS

For any program of feedback and evaluation to be effective in bringing about rational and systematic changes, other elements, perhaps more subtle, should be considered. First, and perhaps the most significant, is the commitment given the program by the institution leaderships. Often the call for rational change, through any means, is more a matter of rhetoric rather than a sincere, strong commitment. Fortunately, at the National Technical Institute for the Deaf, this commitment is real and is supported through an organizational configuration that facilitates change and resources to ensure its reality.

Another important consideration in designing a process of feedback and evaluation is involvement of all segments of the total system in development. Instructors, administrators, students, and employers all played an integral part in the development of a feedback system at NTID. Without this support and spirit of cooperation, it is doubtful that any program evaluation process could be more than minimally successful.

Obviously, the most distinct advantage of involvement and cooperation in the design and development of a process of feedback and evaluation is the mitigation of the unavoidable realities of the politics of evaluation. Needless to say, any process that is designed to measure the relative degree of success or failure of programs is bound to be surrounded by varying degrees of threat and anxiety, especially when the final summary evaluation question is asked, "Are the measured benefits of the program worth the costs (space, personnel, equipment, etc.) relative to possible alternative programs?" This final question permits maximum entrance of political consideration (even in a program involved at achieving a certain set of goals and objectives), because it involves judgements for which it is extremely difficult to bring decisive evidence to bear. It all boils down to the ultimate questions, "What is good and how good is good?"

V. SYSTEM DESIGN

As we know, a number of years ago NTID was merely an idea. As NTID was formally established in the mid-sixties, expectations in the form of goals and objectives were delineated and an organization to meet those expectations was established. As soon as those goals and objectives for the Institute were specified, the seed for an evaluation process was planted. For without the specificity of our mission no form of evaluation could be established. The objectives of the Institute, therefore, serve as the foundation for the evaluation process. In essence, NTID's mission is to provide for postsecondary deaf students, the opportunity to prepare for and pursue semiprofessional and professional technically related programs that lead to successful employment. So, the ultimate criterion for program success at NTID is for our students to obtain meaningful employment and to experience long-term career success.

As program development at NTID evolved, so did a concurrent program of feedback and evaluation. One of the first steps in the process was, with the input and cooperation from affected staff, to develop some basic assumptions about NTID graduates and their ability to cope with employment situations. We have, therefore, assumed that as deaf students progress through a series of planned educational and training experiences that lead to the development of technical, personal/social, and communication competence, he or she is capable of performing and behaving in certain ways on the job. Perhaps the ultimate criterion referred to previously cannot be sufficiently delineated which could cause some operational difficulty later in time. However, some program compromises must be made in the early phases of development to assure the input of reasonably sound data.

Let's review the six major assumptions and some of the major subassumptions that are associated with NTID's Graduate and Feedback program.

1. The NTID graduate is technically competent to perform the task of the entry level job into which he/she is placed. To support this major assumption, several related hypotheses have been developed. Some of the more important are:

   A. The graduate can perform all procedures, use all materials, and operate all equipment necessary for his/her job.

   B. The amount of on-the-job training will be equal to or less than hearing peers.

   C. The graduate exhibits potential to assume additional technical responsibilities for job expansion.

   D. The employers will perceive the NTID graduate as capable of competing technically with hearing co-workers.

2. The NTID graduate is capable of meeting communication requirements.

   A. The graduate is prepared to meet all communication requirements for his/her specific job: written, oral, and manual.

   B. The graduate will be able to understand and follow instructions from his/her immediate supervisor.

   C. Communication demands and requirements will not interfere with the graduate's overall on-the-job effectiveness.

3. The NTID graduate has the personal/social competency to be socially effective on the job.

   A. The graduate is perceived as a cooperative worker within the work group.

   B. The graduate is capable of meeting the responsibilities of his/her entry level position with respect to: (1) Meeting attendance requirements; (2) performing work accurately and orderly; and (3) maintaining appropriate personal appearance.

4. The NTID graduate is placed in a suitable employment setting which utilizes his/her training and skills.

5. The NTID graduate understands what his/her employer expectations are with respect to performance standards.

6. This last assumption is equally important to the other five and that is that the NTID graduate perceives his or her NTID experience as relevant toward the job into which he or she is hired. It is important that our students know that they are opening doors for other deaf workers and it is their hands on those doorknobs that keep the doors

open. What they do, how they perform, may have an effect on what happens with future graduates of NTID. We know that we are charged with opening the doors to opportunity, but it is important to know whether or not the graduates perceive that.

VI. DATA SOURCE AND INSTRUMENT DESIGN

With goals, objectives, program assumptions, and sub-assumptions developed, the next major hurdle was a decision on the methodology for data collection and the active design, development, testing, and evaluation of the data collecting instruments.

With the large number of options available to collect data it was decided, at least in the initial phase of development, that NTID would survey the entire graduate population seeking employment through a self-designed and developed questionnaire over a two-year period following the first day of actual employment. In addition to surveying graduates, a parallel program to survey immediate supervisors would also be developed and implemented. It should be noted, however, that other forms of information collection will be utilized to corroborate and validate the questionnaires.

Self-reporting questionnaires seemed to have several initial advantages over interviews:

1. They are relatively inexpensive to administer and can be distributed quickly through the mail. This is especially important since NTID graduates are working in at least 34 states plus Washington, D.C.
2. Graduates and supervisors would be able to respond at their own pace and in their own privacy.
3. They are standardized so all graduates and supervisors have the same printed questions to answer.

Even though the questionnaires in use at NTID are easily administered, we also recognize their apparent limitations. The primary problem, as we see it, is that graduates and supervisors may not be truthful in their responses. Therefore, it may be difficult or impossible to determine their validity. The errors in response may of course be careless or purposeful.

Obviously, another problem with questionnaires is the possibility of a low rate of response, resulting in a biased sample. Fortunately, our rate of return on our questionnaires to date is averaging approximately 75 to 80 percent. The primary reason for this, we suspect, is that:

1. Employers took a direct part in assisting in the development and testing of the supervisory instrument and they further made several suggestions regarding its length, specific wording, and the cover letter which explains its purpose.
2. Students are informed prior to leaving the Institute that a follow-up program is operational and that their input into the program will help strengthen the NTID system for future deaf students. In addition to this, all student questionnaires were designed and developed with the student's language and communication capabilities in mind. Several consultations were made with NTID's Communication Division to assure appropriate language construction.

The steps taken into consideration in the development of questionnaires for feedback and evaluation included several other measures. First, we tried to determine, through extensive consultation with

NTID personnel from the technical, personal/social and communication areas, what information was needed and what was not. Next, we determined whether the questionnaire items would be structured or unstructured; we drafted the items, pretested and even interviewed several graduates to discover any potential problems that typical analysis may not uncover. An additional step was taken to pre-code the items in the questionnaire for later keypunching and analysis, and to reduce processing costs and time. Open-ended questions were used as sparingly as possible. In addition to the steps previously described, steps were taken to make the questionnaire neat and attractive, to explain the importance of the study, to avoid questions which may have been perceived as invasion of privacy, and questions were designed to be as short and as easy to complete as possible.

VII. SURVEY TIMING

As indicated before, the present program of Feedback and Evaluation at NTID encompasses a two-year period following graduate's employment. Graduates and supervisors are contacted during six different time frames (3 wks., 3 mo., 6 mo., 1 yr., 18 mo., and 24 mo.). Each time frame has some common and unique purposes. For example, a three-week follow-up is general and serves a public relations function as well as an evaluatory function. Obviously, little can be learned about mobility and specific job satisfaction and performance after three weeks. These issues are addressed in later questionnaires.

IX. ANALYSIS AND INTERPRETATION

The ends of a Feedback and Evaluation program are obviously the analysis and interpretation of data and the resulting program changes that follow. Unfortunately, we have not yet reached that end since the road of program evaluation is often longer than one realizes. NTID is still too new and our graduates are too few to tell us much about how we are achieving our broad program goals. Data is being collected and analyzed, but our staff, most directly associated with data analysis, indicate our N's are still too small for any programmatic conclusions.

Early findings

What information we do have regarding graduates of the National Technical Institute is encouraging. Table 1 presents information in terms of graduates exiting NTID and available jobs by exit point as of May 8, 1975.

TABLE 1

Exit point	Graduates of the National Technical Institute for the Deaf	Percent
Certificate	15	5
Diploma	99	37
Associate	113	41
Bachelors	44	16
Masters	2	1
Total	273	100

In terms of the 273 graduates who have exited into jobs, the data suggest NTID is meeting the needs of a diverse student population by providing multiple exit points leading to employment. Deaf students are being provided with opportunities for technician and professional positions and with opportunities to prepare for and pursue advanced programs of technical education and training. Broad flexible curricula are being offered that are designed to meet the many and varied special needs of able young deaf adults who seek education and training. Table 2 presents information in terms of the status of the graduates available for employment.

TABLE 2

	Graduates of the National Technical Institute for the Deaf	Percent
Available for employment	273	
Placed	262	96
Placement in process	11	4

Table 2 indicates that of the 273 graduates who are available for employment, 262, or approximately 96 percent, have been placed in positions. Eleven students, or approximately 4 percent, are in the process of being placed at this time. It should be pointed out that 95 percent of the graduates who have been placed in jobs have found positions commensurate with their level of training.

In terms of the graduates, the data indicate that NTID graduates are working in business, industry, education, and government environments of varying sizes in technician and professional positions in science, technology and applied arts. Eighty-seven percent of the graduates are working in industry, 8 percent in government, and 5 percent in educational environments.

The graduates of NTID who have exited into jobs have found positions in 34 states and the Dominican Republic. Thus, NTID is meeting its national charge in terms of providing students with positions on a national geographic scale.

Summary

It is proposed that postsecondary educational institutions have a responsibility to meet the needs of their students and the requirements of sources of employment. Since both will change, so too must the programs of education and training. Such change must be rational. One way to promote rational change is through follow-up on the accommodation of program graduates to the world of work—technically, personally, socially, and from a communication perspective. Using follow-up information as a base, program changes can be made that can assist in keeping the institution in tune with the needs of students and the requirements of the larger society in which graduates must function.

BIBLIOGRAHPY

1. Linowes, David F., "Strategies for Survival," New York: American Management Association, 1973, p. 15.
2. Ibid., p. 150.
3. Sarnoff, Robert W, "Success is Killing Arts in America." Rochester, N.Y. Democrat and Chronicle, p. 1F.

4. Ibid., p. 1F.
5. Ibid., p. 5F.
6 Clarcq, J. R. and Gates, Robert R., "A Model for the Development of a Centinuum of Services Leading to Vocational Placement of Deaf Students." Institute Report: "Adapting Occupational Training and Information to the Needs of the Deaf and Hard of Hearing." Michigan Department of Education, Allen Park Public Schools, 1971, p. 16.
7. Anderson, Scarvia B. et al., "Encyclopedia of Educational Evaluation," Jossey-Bass, Inc., San Francisco, 1975, p. 140–141.
8. Ibid., p. 143.
9. Ibid., p. 1.
10. Ibid., p. 3.

BUSINESS MEETINGS

PRESIDENT'S REPORT

Jack W. Brady

At this, the 47th meeting of the Convention of American Instructors of the Deaf, we are celebrating our 125th anniversary. The first meeting of CAID was held 125 years ago from August 28 to August 30, in 1850, in New York.

For many years it was traditional for the President's address to be given at the opening session and some were of considerable length. In recent years the President's Report, as it is now called, has been given at the first business meeting. In some years, no President's Report was given at all.

This report today will be brief. Dr. Quigley and the various committee chairpersons will be giving reports at our business meetings covering the many activities of our organization during the past two years. The actions of the Executive Committee also will be a part of the official proceedings of this meeting.

At the CAID meeting two years ago in Indianapolis the newly elected officers and directors received a mandate from the membership "to revise the constitution, for consideration and adoption at the next biennial meeting."

In May, 1974, the Executive Committee met for two days at the Kendall Demonstration Elementary School in Washington, to revise the CAID Constitution and develop a set of bylaws. To help us hold down the expenses of this meeting, Gallaudet College graciously provided housing at a nominal cost. This two day meeting does not begin to reflect the amount of time spent on this project.

Howard Quigley, members of his staff and the Executive Committee spent many hours of preparation for the meeting, studying the present CAID Constitution, the constitution and bylaws of other organizations and soliciting suggestions from a number of individuals. The final draft was published in the September, 1974 issue of the CAID Newsletter. We requested the membership to study the proposed constitution and bylaws and to send suggestions and comments to the Executive Committee. I hope that by now all of you have studied and are familiar with the proposed constitution and bylaws. Discussion of this document is on the agenda for tomorrow's business meeting and will be voted on at Thursday's business meeting. As your President, I recommend that the proposed constitution and bylaws be adopted. Our organization has never had a set of bylaws and the constitution is long overdue for a complete revision.

During the past two years, our membership has been declining. This is a great disappointment to me personally and is of vital concern to all of us. The reasons for the decline are not too clear, but it is obvious that we must find ways to broaden our membership base. We must also find ways to make our organization more responsive to the membership. To do this we must encourage greater involvement of all members in the affairs of CAID. We need to encourage the establishment of CAID student affiliates on college campuses and even state affiliates within the states. We also need to consider the possibilities of holding regional CAID meetings during alternate years when our national meeting is not held.

I have great faith that CAID will continue to be a strong organization, occupying a dominant position in the field of education of the deaf as it has for 125 years. However, it is not going to just happen; we must all be willing to become involved, to participate and as an organization to face the issues and take positive action.

The past two years have been challenging and rewarding. I am most appreciative to so many: to Howard Quigley, Ferne Davis, the National Office staff, and the Executive Committee for your support and cooperation; to all committee chairpersons for your fine work; to Bob Davila who has been a great aid to me and who has put together a truly outstanding program; to Rance Henderson, H. G. Royal, R. M. McAdams, Pete Ripley, and their staffs, our hosts for this meeting; to Max Kreis for his excellent job as editor of the Newsletter; Henry Bjorlie for once again accepting the tremendous and often thankless task of arranging for interpreters; and most especially to all of you for providing me the opportunity to serve you as President of this fine organization.

THE NATIONAL OFFICE—A REPORT

Howard M. Quigley, Executive Director
Greensboro, N.C., June 24, 1975

This report covers the period July 1, 1973 to June 5, 1975. The following descriptions provide information about current and anticipated activities:

ADMINISTRATION

As before, the Convention of American Instructors of the Deaf (hereinafter referred to as CAID) National Office shares staff and facilities with the Conference of Executives of American Schools for the Deaf (hereinafter referred to as CEASD). The business of the American Annals of the Deaf (hereinafter referred to as AAD), which carries a separate budget, is a function of both the CAID and the CEASD. The staff totals five full-time persons and one half-time person. Each budget—the CAID, the CEASD, and the AAD—shares in the total cost of the National Office which is estimated to be $142,800 for the 1975–76 year. In October, 1974, I was appointed executive director of the National Office on a full-time basis, but I was unable to assume my duties until January 2, 1975. This move necessitated some remodelling of facilities to provide more efficient use of available space.

FINANCES

The drop in membership, resulting in lowered income, has made it necessary to effect as many economies as possible without reduction of services that have been provided the past several years. Budgeting is designed to stay within anticipated income, thus avoiding the need for dipping into reserve funds. The increases in costs across the board are well known to any consumer of goods and services. The CAID has, for several years, invested funds in savings accounts and certificates of deposit. On July 1, 1974, upon authority of the Executive Committee, the CAID entered into a "cash care" agreement with a Washington bank, which provides a flexible program to invest each month all cash surplus in the checking account not needed for operating expenses. Earnings from this procedure will be approximately $3,000, in addition to earnings from certificates of deposit and our savings account.

The attached budget proposal for 1975–76 reflects as accurately as possible anticipated expenses for the CAID share of operating the National Office. The budget proposal for 1976–77 will be presented to the Executive Committee in June, 1976.

The members of the Executive Committee have been routinely supplied with quarterly financial reports. At the close of the fiscal year June 30 a professional audit is made of the year's financial program. Such audits are incorporated into the printed proceedings, for the record.

Recommendation

The two-year interval between meetings of the Executive Committee appears to be too long for the best interests of the organization. This will be especially true upon adoption of the new constitution and bylaws. It is suggested that the Committee plan a meeting at the time the CEASD meets in even-numbered years, to transact necessary business.

MEMBERSHIP

The CAID operates on one principal source of income—membership dues. Income from memberships the past two years is recorded as $57,825 for 1973–74, and $55,918 to date (June 5) for 1974–75. The number of paid members during recent years shows an interesting, but not optimistic trend, as follows: 1955—2,007 members; 1960—2,317 members; 1965—2,866 members; 1970—3,835 members; 1971—4,876 members; 1972—4,197 members; 1973—4,685 members; 1974—3,897 members; 1975—3,741 members (as of June 5).

What happened in 1971 and 1973? More significantly, what has been happening since? Queries to other associations about memberships indicate that the trend is upward—quite contrary to the CAID membership trend. There are two possible causes for the decline; one, for reasons not clear at this writing, the value of a membership to the member as well as to the organization is not spelled out. There is the "things in hand" aspect of membership, such as a subscription to the Annals. There is also the philosophical aspect, which includes the professional attitude of actual and potential members. Two, we have not been vigorous enough in recruiting new members, and holding former members. These activities are incumbent upon all current members.

Recommendation

The Executive Committee is urged to take strong, positive action in the development of a rationale for CAID membership and to institute procedures for advertising and recruiting for members, and for retaining them. This might include consideration of local or regional chapters and student groups. It is further recommended that any study group that is appointed should report no later than October 1, 1975.

NEWSLETTER

The CAID spends about $2000 a year for producing and mailing a newsletter to the membership. It has been a continuous struggle to find persons willing to serve as editors, and to get items of value and interest. We owe sincere thanks to those who have served as editors, and to those who have contributed articles. However, we need to take a good look at the Newsletter and find answers to these questions: Do the members want a newsletter? Assuming the answer is yes, do they feel it is of value to them? What should be its function? Why are contributions so difficult to obtain? How often should the newsletter be published? What format do the members like best? Who should be responsible for preparing the copy (including editing) for the printer? These are the kinds of questions that need answers.

Recommendation

A task force should be appointed to consider aspects of this project, and report to the Executive Committee no later than January 2, 1976.

JOINT ADMINISTRATIVE COMMITTEE OF THE NATIONAL OFFICE

In January, 1975, the president, president-elect and immediate past president of the CAID and the CEASD met in Washington, D.C., to establish procedures for the management of the National Office. By previous agreement between the respective committees a full-time executive director was appointed, who began his duties January 2, 1975. The committees also authorized the formation of an administrative committee to work with the executive director in the conduct of that office.

PROCEEDINGS

It is historical that publication of CAID proceedings every two years has been delayed for many months, awaiting Congressional approval for printing. These delays have substantially reduced the value of the publication. The proceedings have been printed in the Government Printing Office, at no cost to the CAID for production and mailing. The cost estimates for the 1971 proceedings was in the neighborhood of $32,000, which caused concern for the congressional committees. The cost estimate for the 1973 proceedings was $42,000, and we were informed that drastic reductions in the size of the proceedings will be required, along with other economies, if the Government is to consider printing the proceedings hereafter. This will involve. of course, the proceedings of the current meeting.

Recommendation

A task force should be appointed to undertake a study of the editing, production and distribution of the proceedings, and come up with a plan that solves the time factor, at the same time remaining fiscally reasonable.

CONSTITUTION AND BYLAWS

In May, 1974, the Executive Committee met for two days at the Kendall Demonstration Elementary School in Washington, D.C., to develop a CAID revised constitution and set of bylaws. A first draft of these documents was re-studied later, and some revisions made. The revised form was reviewed by an attorney who made further refinements. The final draft was published in the September, 1974, CAID

Newsletter, with a request that the documents be studied and the Executive Committee be notified of any suggested changes, prior to the June meeting of the CAID in Greensboro, when the documents will be up for adoption.

INFORMATION DISSEMINATION

The National Office staff is called upon to provide information about a great variety of subjects related to hearing impairment. Much of it we can respond to, but requests for job openings, scholarship aid and those requiring considerable research we are presently unable to handle, and must refer to other agencies, or simply respond by saying we do not have the information. As noted on other occasions, it might be desirable to establish with other agencies an information response procedure, to avoid the buckpassing that plagues us, and the duplication of effort. One activity that might be considered is a clearing house for job placement, available only to the membership.

CERTIFICATES OF MERIT

The CAID, in cooperation with the CEASD, grants certificates of merit to those who have had 15 or more years of service as teachers of the deaf prior to retirement, or 25 years of teaching service, but not as yet retired. During the year 1973–74, 55 certificates were awarded, and so far (June 5) in 1974–75, 52 certificates have been awarded. Administrators of school programs nominate individuals for the award. The required forms may be obtained by writing to the National Office.

My continued appreciation is extended to the members of the Executive Committee for their cooperation during the biennium, and especially to the staff members who are called upon to perform a wide variety of tasks.

Budget proposal, 1975–76

DISBURSEMENTS

Salaries:	
Executive Director	$8,667
Administrative Assistant	5,157
Special Assistant	3,832
Secretary	3,136
Secretary	2,981
Part-time clerk (1,000 hrs)	3,250
Fringe benefit	4,053
Subtotal	[1] 31,076
Rent	2,280
Insurance	60
Telephone	300
Postage	360
Printing	2,000
Supplies	500
Equipment	250
Equipment maintenance	130
Travel	1,000
Accountant	360
Organization memberships	800
Special services	200
Publishing services	-------
Legal services	500
Contributions	50
Miscellaneous	1,000
Total	40,866

ESTIMATED RECEIPTS

Dues	40,500
Investments	7,500
Total	48,000

Cash assets as of Mar. 31, 1975—$148,433.88.

---

[1] Salaries equal 76 percent of total.

EXHIBIT A

CONVENTION OF AMERICAN INSTRUCTORS OF THE DEAF

Statement of cash receipts and disbursements for the fiscal year ended June 30, 1974

CASH RECEIPTS

Members' dues:	
Regular	$55,725.00
Student	2,100.00
Total membership dues	57,825.00
Interest income	4,571.65
Contract with Gallaudet College	3,774.24
Received from 1973 convention (including return of $500 advance)	3,595.65
Sales of proceedings	197.00
Miscellaneous	163.67
Total cash receipts	70,127.21

CASH DISBURSEMENTS

Personnel services (including fringe benefits)	18,315.69
Special services	1,945.36
Rent	2,167.63
Office supplies and equipment	3,009.49
Insurance	67.50
Telephone, postage, and freight	1,123.16
Travel	4,250.37
Printing	230.98
Refunds	155.00
Professional dues	700.00
Proceedings expenses	1,029.26
Legal and accounting services	575.00
Miscellaneous	127.00
Total cash disbursements	33,696.44
Excess of cash receipts over cash disbursements	36,430.77
Cash balance July 1, 1973	93,179.46
Cash balance June 30, 1974	129,610.23
Above balance comprised of:	
Checking account	51,296.51
Savings account	7,730.03
Savings certificates	70,583.69
Total	129,610.23

National headquarters office statement of cash receipts and disbursements for the fiscal year ended June 30, 1975

CASH RECEIPTS	
Members' dues:	
Regular	$54,130
Student	2,415
Total membership dues	56,545
Interest income	8,018
Sales of proceedings	66
Miscellaneous	156
Total cash receipts	64,785
CASH DISBURSEMENTS	
Personnel services (including fringe benefits)	24,447
Special services	180
Rent	2,195
Office supplies and equipment	1,426
Insurance	62
Telephone	258
Postage and freight	1,035
Travel	1,947
Printing	2,635
Advance for 1975 convention	1,000
Magazine subscriptions for members	13,450
Refunds	209
Professional dues	500
Proceedings expenses	296
Accounting services	188
Miscellaneous	710
Total cash disbursements	50,538
Excess of cash receipts over cash disbursements	14,247
Cash balance July 1, 1974	129,610
Cash balance June 30, 1975	143,857
Above balance comprised of:	
Checking account	5,467
Savings account	8,147
Savings certificates	75,243
Bank certificate of deposit	55,000
Total	143,857

REPORT OF THE JOINT ANNALS ADMINISTRATIVE COMMITTEE

William J. McClure, Chairman

The production of the Annals has gone forward with increased efficiency during the past year due to a number of reasons. These include the stability of the staff in the national office of the Conference of Executives and of the American Instructors of the Deaf, the change whereby Dr. Howard Quigley became full-time Executive Director of the national office in January 1975 and the efficiency of the editors, both of the regular issues and of the Directory issue of the Annals. The financial position of the Annals remains satisfactory. By authorization of the executive committees of the Conference and of the Convention, the Executive Director was authorized to enter into a cash care agreement with the Union Trust Company of Washington, D.C. for the purpose of investing surplus funds of the two organizations of the Annals. During the eleven months this plan has been in operation the Annals has realized an income of $4,154.00. During the year it was possible to provide additional pages to help the editor reduce the number of manuscripts on hand. Advertising revenues remained constant and while costs did increase, the Executive Director effected some procedures which kept increases to a minimum. The national office has instituted procedures to solicit new printing bids periodically. This should result in a minimum of increased costs.

During the past few years the Annals has each year devoted the entire October issue to printing the Lincoln Symposium on media. The Annals was reimbursed for this; however, that project has now ended so the Annals must anticipate funding in full the five regular issues plus the Directory issue. It is quite likely that we will need to adhere to the 48 pages plus cover limit for each of the five issues. This will probably necessitate a slight increase in the cost of subscriptions.

Dr. Kieth Wright, Librarian at Gallaudet College, together with his staff, is working to update the Annals index in a standard format which lends itself to computerized adaptation. The completion date for this project has not been set.

In preparing the 1975 Directory issue the editors in cooperation with the Office of Demographic Studies at Gallaudet College included information on all students who leave school regardless of the reason. This included transfer students, dropouts and graduates. Also included was information supplied by the Deafness Research and Training Center at New York University on deaf students with other disabilities. The editors of the Annals and Administrative Committee appreciate the assistance given on these projects by Dr. Neil J. Murphy and Dr. Raymond Trybus of the Office of Demographic Studies and Dr. Jerome Schein, Director of the Research Training Center, New York University.

I am pleased to include the minutes of the June 21, 1975 meeting of the Joint Annals Administrative Committee.

MINUTES

Joint Annals Administrative Committee

The Joint Annals Administrative Committee was called to order at 7:30 a.m., June 21, 1975, in Greensboro, North Carolina.

Committee members present were William McClure, chairman, Jack Brady, Robert Davila, Roy Stelle, Richard Brill and Armin Turechek. Also present were McCay Vernon, Helen and William Craig, editors, Ferne Davis, administrative assistant, and Howard Quigley, executive director.

The agenda for the meeting was presented by the Chairman, who gave a brief report on the operations and financial status of the Annals.

Item 1.—On motion of Roy Stelle it was voted that the following resolution be adopted:

Resolution

By action of the Annals Joint Administrative Committee the Executive Director is authorized to establish checking and savings accounts and to sign in behalf of the organization documents required by banks and other savings institutions.

Item 2.—McCay Vernon reported as follows:

a. He raised the question whether or not the Annals should publish announcements of positions and job placements. Consensus was that such requests should be treated as paid advertisements.

b. Following recommendation of the editor, on motion by Roy Stelle, it was voted that the APA style of listing references should be adopted, effective with Volume 121.

c. The editor led a discussion regarding vacancies on the AAD editorial board. He requested that William Craig remain on the board, and in addition named the following persons for consideration:

Field of Audiology.—Edna Levine.

Field of Psychiatry.—Luther Robinson, John Rainer, Kenneth Altshuler and Roger Freeman.

Field of Education.—Robert Panara and Jerry Freeman.

Associate Editor.—Sr. Nora Letourneau and Sr. Frances Solano. The editor will fill vacancies from this listing.

d. The editor said that about 60% of the manuscripts presented were rejected. A total of 290 manuscripts have been received since his 1972 report.

e. The editor requested development of a program of reciprocal advertising with publications such as the PRWAD Journal, IAPD Journal, dsh Abstracts, Journal of Speech and Hearing Research, The Journal of Speech and Hearing Disorders and the Volta Review. Consensus was for approval. The chairman asked the executive director and the editor to work out the details. The request of William Blea, coordinator of Southwest Regional Area for the Deaf/Blind, to set aside a page in the AAD for news of the Deaf/Blind was tabled, pending receipt of further details. The editor will follow up on this matter.

Item 3.—Helen and William Craig reported as follows:

a. The section in the Directory the past two years entitled "Selected Topics of Interest" has been well received. The committee consensus was that the section is timely and interesting. The section will be continued in the 1976 Directory, considering such areas as auto insurance and driver licensing. The editors suggested that comments of approval be made to the contributors.

b. The report concluded with a brief explanation of the contents of the Directory and the mechanics of data gathering.

Item 4.—On motion of Armin Turechek it was voted that the budget for 1975-76 presented by the executive director be approved.

Item 5.—On motion of Armin Turechek it was voted that McCay Vernon be re-appointed for another three-year term.

Item 6.—The chairman led a discussion concerning the listing in the AAD August issue of CAID members and their certification status. Consensus was that such listing should be a function of the Council on on Education of the Deaf. The matter was tabled, pending results of Roy Stelle's presentation of it to the CED board.

Item 7.—The chairman declared the meeting adjourned at 9:20 a.m.

REPORT CONCERNING THE COUNCIL OF ORGANIZATIONS SERVING THE DEAF

B. J. Peck, Director, Oregon School for the Deaf, CAID Representative

As representative of the CAID on the Board of Directors of the Council of Organizations Serving the Deaf (COSD), I am filing the following report to the 47th Convention. I attended the COSD Forum in Denver, Colorado in April 1974. At that forum the COSD Board of Directors met several times to discuss the future of the COSD. Since a number of member organizations had not paid their dues at that time and several related extenuating circumstances existed, the Board questioned whether or not there was sufficient support to warrant the continuation of the COSD in its present form.

It was decided at the last session of the Board of Directors in Denver to poll each member organization to determine whether or not that organization wanted the COSD to continue and would/could support it financially through payment of dues.

President David Denton, following an extended effort, finally heard from the majority of member organizations. The final result of the poll was that they wanted the COSD to continue but could not agree to support it financially.

At the 1975 Forum sponsored by the COSD held in Atlanta, Georgia March 26–28, the Board of Directors held a meeting on Thursday evening March 27 with considerably more than a quorum present. (I was unable to attend due to a heart attack suffered on March 22.) The remainder of this report was received from information supplied by William McClure who did attend as representative of the CEASD.

After initial expressions of appreciation to Dr. Mayes, the Continuing Education Center at Gallaudet, the NAD, and the Professional Rehabilitation Workers with the Adult Deaf for organizing the 1975 Forum, the group felt that there could be little profitable discussion concerning the organization of future meetings or the future of COSD until after a meeting of COSD officials and officials of the Department of Health, Education, and Welfare scheduled for April 10, 1975. It was agreed that President Denton and members of the COSD board in Washington would represent COSD at this meeting and would immediately communicate their recommendations to the remainder of the board at the conclusion of the meeting. Subsequently this meeting was postponed until May 29. At this time President David Denton, Dr. Richard Johnson and Mr. Robert Bates representing COSD met with Dr. James Garrett, Dr. Deno Reid, Dr. Boyce Williams and Mrs. Edna Adler of HEW.

President Denton reports that the meeting was most favorable toward the continuance of COSD. It was agreed that COSD would immediately draw up a petition for a grant of some $45,000 for a one-year reorganization study of COSD. This would provide for a Principal Investigator, who would serve as Executive Secretary of COSD, and for clerical help. The Principal Investigator would work with the COSD President and the Executive Committee to study and make recommendations at the next Forum on the restructuring of COSD. There would be funds for office rental, for travel for two meetings of the Executive Committee, for communication and for printing expenses.

The temporary office will probably be located in the National Association of the Deaf headquarters in Silver Spring. The office would keep open lines of communication to the various organizations, channeling information and correspondence received to the proper organizations for answer or for direction. In the future COSD would probably not attempt to present a position per se but would reflect the position or wishes of various member organizations. Member organizations would be notified of congressional hearings and if requested COSD would attempt to schedule representatives for appearance before proper committees and legislative bodies. The national office would also be responsible for organizing and running the national forums which all agree have been of great benefit. Funds for travel would be limited and representatives at meetings of the board of directors would attend at the expense of the organizations which they represent. The above are merely ideas which were suggested at the meeting with HEW officials and would be considered as a part of the study on reorganization.

In view of the probable continuance of federal support and the direction COSD will apparently go, the CAID representative recommends that it would be in the best interest of the CAID and of the entire profession to continue our support of the COSD.

REPORT OF NOMINATING COMMITTEE

Lowell A. Thompson, Phoenix Day School

Mr. President and members of the convention, your nominating committee is pleased to submit the following report. The committee was composed of Dorothy Bruegeman, Elliot Igleheart, Margaret Johnson, Larry Newman and myself as chairman.

The following procedure was used by the committee in arriving at the final slate of officers: 1) Each committee member was asked to suggest names from his/her region. 2) A call for nominations was issued in the March 1975 edition of the CAID Newsletter. 3) The names were sent to the chairman and the members were polled to determine the final slate.

The Constitution states that the president-elect shall become president at the conclusion of his term as president-elect, therefore there is no contest for the position of president. The committee is offering two nominees for each of the officers positions and four nominees for the two open director's positions. To comply with the constitutional requirement that at least three of the five directors shall be teachers, one of the two open director's positions must be filled by a teacher. Since only one of the four nominees for director is not a teacher the possibility of violating the constitution does not exist. The membership of all nominees has been checked and all have been found to be active members in regular standing.

The nominees selected by the nominating committee are:

President.—Robert Davila, Kendall Demonstration Elementary School.

President-elect.—Ellery Adams, Los Angeles County Schools; Joseph Young, Governor Baxter State School for the Deaf.

First vice president.—**Karl May, Arizona State School for the Deaf and the Blind; Les Rudy, California School for the Deaf, Riverside.**

Second vice president.—**Henry Bjorlie, New York State School for the Deaf, Rome; Deborah Sinclair, Phoenix Day School for the Deaf.**

Secretary-Treasurer.—**Gerald Burstein, California School for the Deaf, Riverside; Robert Deming, Montana School for the Deaf and Blind.**

Directors (elect 2).—**Keneth Clark, Kansas School for the Deaf; Margaret Kraemer, Austine School for the Deaf; Jacqueline Sydnor, Virginia School for the Deaf, Hampton; Armin Turechek, University of Arizona.**

IAPD REPORT TO CAID CONVENTION

International Association of Parents of the Deaf, June 25, 1975

Mary Ann Locke, Executive Secretary

The telling accomplishments of the IAPD are best summarized by comparing its status of four years ago with its standing today. In 1971, we had an extensive listing of names and $492.36 in the treasury. Today we have a paid membership of 6,600 and a bank balance of $8,922.39. Our bank balance has gone as high as $15,000.

The growth of the IAPD has been significant and the projects and accomplishments have been remarkable. IAPD has continued to grow with an increase in membership, income and responsibilities, as well as being able to provide more services to parents, affiliate groups and professional organizations.

A most significant obstacle during this past year period was the death of Mrs. Lee Katz, first president and first executive director of the IAPD. Mrs. Katz was instrumental in founding the IAPD, and will be remembered and admired for her efforts on behalf of parents of deaf children.

Until the birth of the IAPD, parents did not have a homebase through which they could be assured of realistic and free-flowing information. They did not have an organization which could serve as a catalyst in the delivery of services to them for their children. We believe that the emergence of the IAPD represents the meeting of these crucial needs.

In 1965 at a meeting of the CAID in Flint, Michigan, Mr. Roy Holcomb proposed that the Convention establish a Parent Section. The CAID agreed that a study should be made to determine the need and the interest in the National Parent Organization.

As a result of that survey, in 1967, the CAID at its meeting in West Hartford, Connecticut, moved to encourage the establishment of the parent organization.

In 1969, the first issues of the newsletter, the Endeavor, were published and distributed from Indiana. The first national convention of the CAID-Parent Section was held in Berkeley, California, with parents from 16 states attending.

In 1970, a meeting of a temporary Executive Board was held in Santa Fe, New Mexico, for the purpose of laying the groundwork for the establishment of a national office with full-time employees to provide continuous service to parents of deaf children. At that time plans were made to hold the second biennial convention in Little Rock, Arkansas.

The CAID gave the Parent Section $3,000 with which to plan and run its second convention. The deliberations of this meeting brought forth the first set of national officers, adoption of by-laws, the charge from the participants for the new officers to go forth with the establishment of a home office and the name change to The International Association of Parents of the Deaf, Parent Section, CAID.

The president conducted the business of the IAPD evenings and weekends from her home or at the NAD office from June, 1971, until October, 1972. Throughout the entire beginnings of the IAPD, the NAD made available its facilities, office equipment, printed the Endeavor and provided additional services free of charge. The CAID covered the postal costs for bulk mailings of the Endeavor.

In October, 1972, the NAD Board provided $13,000 in salary to hire a full-time person to conduct the business of the IAPD in addition to free office space. This was a rich opportunity for the IAPD to depart from a voluntary organization and the IAPD Board approved this action. In October, 1972, the president moved the files and records into the NAD building, resigned her position from Gallaudet College and began working full time for the IAPD. As the IAPD grew, the NAD provided larger free office space.

One year later, October, 1973, financial assistance in the form of salary was terminated by the NAD. By that time the IAPD was financially independent enough to provide not only salary for the Executive Director, but to hire another full time parent. At this point, the IAPD had two full time parents, a home office, a very shaky financial situation and lots of determination to continue to exist.

IAPD now maintains a one-person office with three part time employees. We have no outside sources of income from government or private foundations. We obtain income through the resale of publications, membership and donations. In addition to the paid employees, we supervise and train adolescent deaf youths from MSSD as part of their work-study program. These students work one day each week to improve their office skills. In 1973, we had two students and in 1974 we have increased the number to five. One of the students who successfully completed training at the IAPD has gone on to work in the office of Special Prosecutor for the investigation of Watergate.

A significant change in the physical arrangement of the IAPD office was a move in March of 1974. We moved from a small third floor one-room office in the NAD building to a spacious basement suite. The new suite of offices adjoins the NAD mailroom which facilitates our very important mailing activities. We, too, began to pay a nominal monthly rent for the office space.

We have expanded our telephone service to handle the increased phone traffic. One additional line and one more instrument were installed and a stand-by line was reserved for future expansion. This made a change in telephone numbers necessary.

We have both TTY and voice phones. The TTY continues to be provided on a complimentary basis by Phonics, Inc. It is demonstrated to parents and visitors who stop by and we stress the importance of having a TTY at home for communication as well as a valuable language learning tool.

In addition to our paid employees we depend heavily on volunteers' assistance. This is the first year that we have made extensive use of volunteers in the home office. The IAPD literally would NOT have been able to function as well without the able assistance and dedication of these volunteers. We have had persons coming in on a regular basis and some coming in when they found a few hours to spare. Everyone is busy with their own lives and projects, and the IAPD is indeed fortunate to have people in the Washington areas who care enough about the success and importance of the IAPD to donate their time and skills.

Retired deaf persons, teachers, mothers, secretaries, professors and an occasional school executive have helped us type labels, sort mail, bundle and prepare the Endeavor for mailing as well as numerous other odd jobs.

It is through the cooperation and generosity of these volunteers that the IAPD continues to function and be of service to parents.

The volume of mail is constantly increasing. Basically we are a mail order business. Our main source of income continues to come through the resale of publications and related items which are advertised by mail. As a result, a daily average of 40 pieces of incoming mail and 180 pieces of outgoing mail are handled. In 1974 also we had over 9,000 pieces of incoming and more than 45,000 pieces of outgoing mail.

The type of mail we respond to includes: filling book orders; sending out requests for free copies of the Endeavor; requests for information on other organizations serving the deaf; identifying schools and facilities for families relocating; serving as a catalyst for adopting deaf children; referring parents to appropriate professionals for information on religious education, camp programs, parent educational programs, total communication schools, sign language classes and affiliate chapters. We respond personally to parents who have just discovered that they have a deaf child and provide the necessary reassurance that they are not ALONE. In addition we put parents in touch with other parents and affiliate IAPD chapters. Pleas from parents who are not currently receiving adequate educational instruction for their children as well as how to form an effective parent organization is an important part of our correspondence.

The "I Love You" campaign was launched in 1974. This was designed to help promote greater understanding of deafness and generate questions in the most enjoyable and pleasurable way possible. It is hoped that the "I Love You" sign will become as common place to the man on the street as is the "Peace" sign. By generating questions, persons are led into meaningful discussions which creates more understanding and makes this a better, more receptive world for all of our children.

The need for a more positive self-image for young deaf children was met by the IAPD by developing the "Someone Just Like Me" dolls. These 7½-inch red, white and blue bean bag Raggedy Ann and Andy dolls have facsimilies of hearing aids attached. In this way, young deaf children have a doll with which they can identify.

The Communication Kit No. 1, along with a flyer to advertise the availability of the Kit, was developed and produced by the IAPD with the financial assistance of the Public Service Program at Gallaudet. The Kit is to facilitate communication between parent and child at the earliest possible moment in order to close the communication gap. This Kit was designed specifically for the parent just discovering that his child has a hearing loss. One of the first places a parent turns is to the public library. By placing the Kits in libraries all across the country a parent finds an informative, easy-to-understand, complete package he can take home and digest. The Kit contains information on all levels of deafness, providing parents with an understandable explanation of deafness and sharing the knowledge and insights of other parents, professionals, and deaf persons.

Most importantly, it gives the parent the knowledge that he is not alone . . . that there are many other parents who have successfully raised a deaf child. Reassuringly it explains that his child with good communication skills can develop into a useful, competent human being with the necessary academic, social and psychological skills necessary to compete in society today.

A key-stone is an arch that is the main support of a building. A key-note speech presents the essential issues of interest to an assembly. A network is a structure of lines of communication to key people alerting them to the need for support for essential issues that affect all of us as parents and friends of the deaf. One of the most important things that the IAPD can do is to speak out loudly in a united voice when issues affecting the welfare of our children arises. Money won't get us all we need. Apathy won't get us anything. But a well organized key network has the potential of moving mountains and bringing about change for the best interest of deaf persons everywhere.

Our key people are spread all across the country. The goal is to have as many contacts as possible in every state. As key people are alerted to a special project, they in turn contact as many people as they can in their state who will react with letters, and/or telephone calls. Thus, the strengths and influences of a united effort are brought to bear on important issues. The object is to set the wheels in motion . . . to bring about action . . . and change.

For example:

If educational programs and services are being phased out, the key network should be protesting from coast to coast;

If job discrimination toward deaf persons is known to be taking place, the key network should be able to trigger an audible objection;

If newspapers and TV stations are referring to the "deaf and dumb," media people should not only be hearing from the home office, but from hundreds of key persons so that they will be educated to the detrimental affect of this terminology;

Where there is no visibility and knowledge of deafness, the key network should provide it;

Where progress is being impeded, the key network should be registering disapproval;

Where good things are happening the key network should applaud and lend support.

Anyone can become a key person. Membership in the IAPD is not essential nor is being a parent of a deaf child. As long as a person is willing to work for the best interest of deaf individuals and their families, we welcome them.

The key network is as powerful and determined as those who belong to it will permit it to be.

The future is bright for the IAPD. Our financial position continues to improve. We are providing more information and a broader kind of information to parents hungry for knowledge in trying to help their children. Professionals are looking to the IAPD for guidance in developing better and more comprehensive programs for parent education.

People have helped in the past, are helping, and will continue to help the IAPD spread the word in order to reach more parents. We must continue to cooperate with other organizations as well as build our affiliate chapters into more active service organizations. There needs to be a greater thrust for the value of becoming an IAPD member. In order to have sufficient political clout our organization must grow in numbers. We need to cultivate membership not only here in the United States and Canada, but we need to reach out to parents all over the world.

The IAPD needs to continue to provide a variety of publications and items related to deafness. Parents, would, therefore, be able to view the IAPD as a one-stop shopping place and resource center. In this way, we would eliminate some of the frustrations and confusion that "new" parents encounter.

Our financial situation continues to be of prime concern. If we are to continue to expand our services and broaden our base of operations, we must search for more permanent financial stability. We must be able to deliver our promised services.

The IAPD is an exciting and irresistable challenge! By working together, we have the knowledge that we can turn the dreams of today into the realities of tomorrow for all of our children.

COUNCIL ON EDUCATION OF THE DEAF

Executive Board

MINUTES

President Winifred Northcott called the meeting of the Executive Board of the Council on Education of the Deaf to order at 8:30 a.m. on June 24, 1975, at the Royal Villa Motel, Greensboro, North Carolina. A quorum was present. Members attending were:

Alexander Graham Bell Association—Dr. Winifred H. Northcott, Dr. Barbara Beggs, Dr. Robert Frisina.

Convention of American Instructors of the Deaf—Mr. Robert W. Tegeder, Jane C. Williams, Mr. Jack Brady.

Conference of Executives of American Schools for the Deaf—Dr. Richard G. Brill, Dr. Doin Hicks, Dr. Ben Hoffmeyer.

Committee on Professional Preparation and Certification—Dr. Ralph L. Hoag, Dr. Roy M. Stelle.

Legislative Committee—Mr. Richard Flint.

Also present were Dr. Howard Quigley, Executive Secretary of CEASD, and Dr. Ann Mulholland, member of the CED/EPPHI Ad Hoc Committee on Educational Personnel Competencies.

Dr. Stelle's name had been listed by mistake as having been present at the previous meeting. Dr. Brill made a motion that the minutes be accepted as corrected. Dr. Hoffmeyer seconded the motion. Motion passed.

TREASURER'S REPORT

The report presented by Mr. Tegeder for the period January 1, 1975, through June 30, 1975, showed a checking account balance of

$22,817.08 and a savings account balance of $2,649.25, a total of $5,466.33. A correction was made in the savings account interest. Dr. Hoag moved to approve the corrected semi-annual treasurer's report. Dr. Brill seconded and the motion passed.

A proposed budget for 1975–76 was presented. It was requested that the budget indicate the total available funds ($5,466.33). Williams moved to include the $2,000 item for possible consortium membership. Dr. Frisina seconded the motion. Following a discussion of the role of CED, as indicated by the objectives from the Constitution, Dr. Beggs made a motion to table the motion, Dr. Brill seconded; motion passed. The question of approval of the budget was postponed until Dr. Connor could be contacted for necessary information.

Three versions of Proposed Travel Reimbursement Guidelines were presented. Dr. Frisina made a motion that Proposal III ($.15 per mile mileage and $30.00 per diem be adopted. Motion was seconded by Dr. Brill; passed.

Dr. Brill, commenting on the Proposed Guidelines, referred to the fact that meals, lodging, and travel could be used for people who are asked to testify, for example, as well as for members of the large committees.

LEGISLATIVE COMMITTEE REPORT

In the absence of Dr. Connor, chairman, a written report was read. Recommendations relative to the report awaited further information from Dr. Connor. Dr. Frisina raised the question of whether CED should develop some position papers.

COMMITTEE ON PROFESSIONAL PREPARATION AND CERTIFICATION

Major activities of the Committee since November 1974 which were mentioned by Dr. Hoag, chairman, included: (1) Newsletter sent to all program directors. (2) Planning session held in Tucson. In general, participants said the standards are effective. They recommended the incorporation of several elements (medical model, clinic model—in contrast to university based programs). (3) Appointment of new committee members.

No final date by which all programs must be re-evaluated has yet been established.

Dr. Roy Stelle, secretary, presented a proposed budget for the period July 1, 1975—June 30, 1976. Dr. Beggs made a motion that the budget be approved, with the addition of a $2,000.00 equipment item, with a $30.00 fee for new applications and a $10.00 fee for conversion applications. The motion was seconded by Dr. Hoffmeyer. Discussion followed. Dr. Beggs moved to amend her motion by changing the conversion fee to $5.00 and making the new budget effective as of September 1, 1975. Dr. Brill seconded. The motion carried.

Dr. Stelle requested that a resolution be provided by CED to authorize his moving the Committee bank accounts to Tucson. Mr. Tegeder made a motion to that effect; Mr. Flint seconded it. The motion passed. The secretary is to prepare the resolution and send it to Dr. Stelle.

COMMITTEE ON INTERNATIONAL AFFAIRS

Dr. Brill, chairman, reported that Garber Tour III, around the world, had been cancelled. The two-week tours to Hong Kong and Japan and to the Philippines can each accommodate 61 people.

There was discussion on the possibility of CED's sponsoring an International Congress in the U.S. The many problems and the enormous costs of such an endeavor were pointed out. No motion was made; it was suggested that the question be re-considered at the next Executive Board meeting.

CED/EPPHI AD HOC COMMITTEE ON EDUCATIONAL PERSONNEL COMPETENCIES

Dr. Ann Mulholland, Committee member, presented the written report prepared by Dr. Schmitt, chairman. She reported that the Committee had functioned well and seemed to be an effective way to consider problems, to provide guidance and informed judgement. She mentioned several conclusions arrived at by the Committee: With the expansion of day programs, many people who are not knowledgeable are handling deaf children. Consequently, many deaf children are "falling through the cracks." The delineation of competencies of both personnel and administrators is necessary. The delineation of competencies needed in different settings is necessary. It is felt that a matrix (distinctive features approach) might be a proper way of examining with special care the competencies needed. Something like a conference might be a possibility and accomplish a good bit. The proceedings of such a conference could be provided to administrators in the hope of increasing the probability of their hiring individuals with desired qualifications.

Following discussion, Dr. Frisina moved that a three person committee be constituted for the purpose of accomplishing the goals in attachment C of the ad hoc committee report on personnel competencies. Dr. Beggs seconded the motion. It passed.

NEW BUSINESS

The date and place of the next meeting was discussed. The feeling was expressed that the Board should be raising issues, discussing processes or describing mechanisms for arriving at points of unanimity. Other points to be considered are the formation of a long range planning committee and revision of the constitution and by-laws. It was stressed that Board activities are not program oriented, but issues oriented. The unresolved question is the process to surface these issues. Mr. Flint made a motion that the presidents of the three constituent organizations be requested to submit to President Northcott by October 15 a list of the major issues which they feel should be discussed by CED. Dr. Hicks seconded the motion, and it passed.

Williams made a motion that the next meeting of the Board be scheduled during the ASHA meeting in November. Dr. Beggs seconded; the motion carried.

Dr. Brill made a motion that CED request through the president of the constituent organizations that the activities of CED be reported by annually including a copy of the CED minutes in the organization's publication. Dr. Hicks seconded the motion. It passed.

Dr. Northcott read a letter from Grace Hanson inquiring about a newsletter from CED. It was decided that the intent was covered by the previous motion on the publishing of minutes.

Dr. Hicks is to check on the annual report which is to be forwarded to the recorder of deeds.

The proposed budget was re-introduced for consideration. Dr. Hicks made a motion that the budget be amended to include $1,000 for interim membership in the consortium and that the budget be adopted as amended. The motion was seconded by Dr. Frisina and passed.

Dr. Brill moved that a contingency item of $500 be added. Mr. Brady seconded that motion and it passed.

There being no further business, the meeting was adjourned.

NECROLOGY COMMITTEE REPORT

Pauline (Polly) J. Shahan, Gallaudet College, Washington, D.C.

Name	Born	Died	Address
Anderson, Thelma A.	Apr. 2, 1921	Apr. 17, 1975	Mary E. Bennett School for the Deaf, Los Angeles, Calif.
Asbury, Emily	July 4, 1888	Oct. 20, 1974	Alabama Institute for Deaf and Blind, Talladega; Georgia School for the Deaf, Cave Spring.
Bailey, Ruth	Dec. 4, 1885	May 14, 1974	Illinois School for the Deaf, Jacksonville.
Baker, Francis Leon	Oct. 5, 1919	Oct. 11, 1974	Louisiana State School for the Deaf, Baton Rouge; Virginia School for the Deaf and Blind, Staunton.
Bass, Mrs. Mary Scott	Apr. 22, 1885	Nov. 25, 1973	Virginia School for the Deaf and the Blind, Staunton.
Beal, Mrs. Dorothy		Oct. 1974	Omaha Hearing School for Children, Inc., Omaha Neb.
Benning, Mrs. Doris	Sept. 21, 1900	May 11, 1975	New York School for the Deaf, White Plains.
Berry, Mary Virginia	July 25, 1911	Sept. 11, 1974	Arkansas School for the Deaf, Little Rock.
Berube, Mrs	Mar. 21, 1896		The American School for the Deaf, West Hartford Conn.
Bickham, Mrs. Karen	June 15, 1941	Aug. 9, 1974	The Ohio School for the Deaf, Columbus.
Blackburn, Mrs. Nancy Catt	Oct. 20, 1916	Oct. 9, 1974	Virginia School for the Deaf and the Blind, Staunton
Burnes, Mrs. Caroline H	Apr. 15, 1913	Feb. 27, 1975	California School for the Deaf, Berkeley.
Davies, George H	July 15, 1896	Mar. 24, 1975	Oklahoma School for the Deaf, Sulphur.
Dickmann, Mrs. Eileen	Apr. 25, 1909	Apr. 18, 1975	School for the Deaf, Jr. High School 47, New York, N.Y.
Doherty, Sister Marie Gertrude		Nov. 5, 1974	St. Rita School for the Deaf, Cincinnati, Ohio.
Fincher, Mrs. Mable	Mar. 18, 1905	Oct. 11, 1974	Georgia School for the Deaf, Cave Spring.
Fomby, Chester L	May 24, 1913	Mar. 9, 1974	Alabama Institute for Deaf and Blind, Talladega.
Gardner, Dr. Rosalyn	1911	Feb. 19, 1975	Gallaudet College, Washington, D.C.
Garrow, Olive	Oct. 13, 1897	Jan. 12, 1975	St. Joseph's School for the Deaf, Bronx, N.Y.
Glancy, Leonard E	Feb. 16, 1916	Apr. 4, 1975	Indiana School for the Deaf, Indianapolis.
Goodwin, Will G		Sept. 1973	Mississippi School for the Deaf, Jackson.
Hartwell, Mrs. Mildred Elizabeth	Jan. 31, 1895	Mar. 12, 1975	Eastern North Carolina School for the Deaf, Wilson; The Austine School for the Deaf, Brattleboro, Vt.; New Jersey School for the Deaf, West Trenton; The American School for the Deaf, West Hartford, Conn.; Maryland School for the Deaf, Ogden.
Hawkins, Glenn R	Apr. 6, 1901	Nov. 22, 1973	West Virginia Schools for the Deaf and the Blind, Romney.
Hill, Mrs. Mary Elizabeth	July 23, 1893	Aug. 3, 1974	Nebraska School for the Deaf, Omaha.
Hopkins, Mrs. Leonora Hourigan	July 21, 1893	May 3, 1975	The Florida School for the Deaf and the Blind, St. Augustine.
Hopper, Eunice	Mar. 11, 1886	June 7, 1973	Illinois School for the Deaf, Jacksonville.
Huff, Kenneth F	June 22, 1911	Apr. 12, 1975	The Wisconsin School for the Deaf, Delavan; Nebraska School for the Deaf, Omaha; Arkansas School for the Deaf Little Rock; Louisiana School for the Deaf, Baton Rouge; New York School for the Deaf; Rochester N.Y. school for the Deaf, Rochester, N.Y.; West Virginia School for the Deaf, Romney; The Kendall School for the Deaf, Washington, D.C.; The Kentucky School for the Deaf, Danville; Hawaii School for the Deaf, Honolulu.

Name	Born	Died	Address
Jackson, Mrs. Ruth Comp	Sept. 8, 1895	July 15, 1973	Nebraska School for the Deaf, Omaha.
Kelly, Mrs. Sally Lynn	Feb. 17, 1905	Apr. 16, 1974	California School for the Deaf, Riverside.
Korneth, Mrs. Gwendolyn F	Jan. 6, 1909	Aug. 28, 1973	New York School for the Deaf, White Plains.
Long, Sister Rose Alma		Jan. 16, 1974	St. Rita School for the Deaf Cincinnati Ohio.
Marshall, Emma Rebecca	Oct. 15, 1895	July 10, 1974	Nebraska School for the Deaf, Omaha.
Motley, Mrs. Susan	Nov. 17, 1909	Aug. 28, 1973	Missouri School for the Deaf, Fulton.
Newton, Sam B		March 1974	Georgia School for the Deaf, Cave Spring.
Nies, Dr. Edwin W	May 23, 1890	Oct. 16, 1973	New York School for the Deaf, White Plains; Lexinton School for the Deaf, New York N.Y.
Nolan, Sam M	July 22, 1914	Jan. 4, 1974	California School for the Deaf, Berkeley.
Paxton, Fannie Elizabeth	May 20, 1901	July 8, 1974	Virginia School for the Deaf and the Blind Staunton.
Railing, Sam	Feb. 25, 1904	Oct. 5, 1974	Rochester School for the Deaf, Rochester N.Y.
Ramsey, Charles N	May 30, 1878	Apr. 7, 1975	Kansas School for the Deaf, Olathe.
Rankin, Dr. Carl Emmet	Sept. 14, 1892	Feb. 24, 1974	North Carolina Schools for the Deaf, Morganton; Gallaudet College, Washington D.C.
Reed, Mrs. Neil D. Driggs	Mar. 16, 1900	Feb. 10, 1975	Los Angeles City Classes for the Deaf, California; Utah Schools for the Deaf and the Blind, Ogden.
Roberts, Earl	Aug. 27, 1920	Mar. 22, 1975	New Mexico School for the Deaf, Santa Fe; Michigan School for the Deaf, Flint.
Robertson, George C	Sept. 9, 1909	Aug. 12, 1974	Missouri School for the Deaf, Fulton.
Schulte, Sister Mary Sienna		Apr. 5, 1974	St. Rita School for the Deaf, Cincinnati, Ohio.
Sheahan, Mary	Aug. 9, 1908	May 31, 1973	St. Joseph's School for the Deaf, Bronx, N.Y.
Soderlind, Mrs Lydia A	Dec. 31, 1913	Mar. 18, 1975	Hawaii School for the Deaf, Honolulu.
Standley, Mrs. Mary	Feb. 16, 1896	Aug. 11, 1973	Illinois School for the Deaf, Jacksonville.
Swain, Mrs. Gertrude	Aug. 26, 1895		The American School for the Deaf, West Hartford, Conn.
Tate, Mrs. Pattie Thomason	Sept. 18, 1882	July 21, 1974	North Carolina Schools for the Deaf, Morganton.
Tatler, Grace	July 14, 1895	Feb. 12, 1974	Alabama Institute for Deaf and Blind, Talladega.
Taylor, Mrs. Margaret L	Jan. 3, 1904		The American School for the Deaf, West Hartford, Conn.
Thweatt, Troy	July 4, 1896	July 6, 1974	Alabama Institute for Deaf and Blind, Talladega.
Tittsworth, Laura	Mar. 9, 1901		California School for the Deaf, Berkeley.
Tollefson, Olaf L	Mar. 19, 1916	July 11, 1974	Oregon State School for the Deaf, Salem; Georgia School for the Deaf, Cave Spring; Florida School for the Deaf, St. Augustine.
Trakken, Elaine		Jan. 1974	Minnesota School for the Deaf, Faribault.
Whitehead, William M	Feb. 10, 1900	July 21, 1974	Virginia School for the Deaf, Hampton.
Wierk, Mrs. Myrtle	Oct. 20, 1902		The American School for the Deaf, West Hartford. Conn.
Woodbury, Max W	June 13, 1877	Dec. 29, 1973	Utah Schools for the Deaf and the Blind, Ogden.

INVITATION FOR THE 1979 MEETING

Virgil Flathouse, Ph.D.

President Brady and members of the CAID who are here today: because the CAID convention has not been held in the southwest for a number of years, because Texas now has one of the more advanced plans for regionalization in the nation, because Austin, Texas is an essential location in Texas, has adequate convention facilities and is also the site of the Texas School for the Deaf, which has the largest number of registered students in the country, and because we Texans want you all to experience the friendliness of Texas, that I as superintendent of the Texas School for the Deaf wish to extend a warm invitation to the Executive Committee of the CAID to consider Austin, Texas for the site of the 1979 convention. Thank you.

CAID NEWSLETTER REPORT

Max Kreis

I have always heard that Texas has the biggest of everything. Well, I can promise they have the biggest thunderstorms going at this time of the year. I think I am the only person from California who came to Greensboro by way of Canada. I left home last Friday, and I'll tell you later some of the other places I have been, but I did finally arrive here.

I need to tell you a few things going on about the newsletter. First of all, my association with the newsletter began, incidentally enough, in the halls at the New Mexico School for the Deaf in Santa Fe when I was talking with Dr. Howard Quigley and we were discussing the lack of communication among deaf educators and things we might do to provide a communication link all over the United States so that we could become more informed as to what is going on. He casually mentioned the fact that the CAID newsletter had not put out an edition the previous year, and at that point I promptly volunteered my services as editor starting last fall.

Several editions were published this year and I received good response from the readers, but did not receive enough material and articles to continue with editions this fall.

I recommend that in order to obtain more articles, more information, more news coverage, that we have five or six associated editors in various parts of the country to be responsible for their areas: someone in the New England states to gather information and articles from that area, for example. With the input from these areas I believe the newsletter can become the type of information service for which it has the potential.

I will be around here all day today and tomorrow, and would like to hear from you to incorporate your ideas into future issues. So if anyone would like to volunteer his services to provide information on this basis I would really appreciate hearing from you. Thank you.

RESOLUTIONS REPORT

Carole Apple

RESOLUTION NO. 1

The forty-seventh CAID, being privileged to have held its meeting in Greensboro, North Carolina on June 22–26, 1975, has enjoyed the gracious hospitality of this city and state. Be it

Resolved, That all the members attending this convention express through this resolution, their most sincere appreciation for the warm welcome extended by Mrs. James Holshouser on behalf of the State of North Carolina and mayor Jim Melvin on behalf of the city of Greensboro.

RESOLUTION NO. 2

Where the excellent planning and hospitality of our hosts resulted in an enjoyable and profitable convention, be it

Resolved, That the convention extends its sincere appreciation to Secretary David Flaherty of the North Carolina Department of Human Resources; Mr. Rance Henderson, Director of the North Carolina Schools for the Deaf; Mr. R. M. McAdams, Superintendent of the Eastern North Carolina School for the Deaf, Mr. H. G. Royall, Jr., Superintendent of the Central North Carolina School for the Deaf; and the staff of the three North Carolina Schools for the Deaf; and

Whereas the planning done by our hosts could not have been accomplished without the help of a number of local agencies and organizations, therefore be it also

Resolved, that the convention express its gratitude to Ralph Deatherage and Boots Hinkle of the Greensboro Chamber of Commerce; Betty Hendrickson and all members of the Quota Club in Greensboro; the news media; Kathy Campbell and all the staff of the Royal Villa, and the staff of the Holiday Inn-Four Seasons.

RESOLUTION NO. 3

Be it resolved, That appreciation be extended to Dr. Howard Quigley, executive director of the National Office of the CAID, for his continuing efforts toward the growth of our organization;

That appreciation be expressed to Mr. Jack Brady, President of the CAID, and members of the Executive Committee for their outstanding leadership of our organization and

That our gratitude be extended to Dr. Robert Davila, Program Chairman, to section leaders, moderators, interpreters, and media support personnel who together planned and implemented a very worthwhile program.

RESOLUTION NO. 4

This year Dr. McKay Vernon is beginning his third three-year term as editor of the literary issues of the American Annals of the Deaf.

Whereas the American Annals of the Deaf is recognized as one of the finest professional journals in our field, with a rapidly increasing circulation which grew by about 15 percent last year to a record high of about 1,700 regular subscribers this year; therefore be it

Resolved, That the members of the convention express through this resolution their sincere appreciation to Dr. McCay Vernon for his unselfish contribution of time and effort during the past six years in service as the Editor of the American Annals of the Deaf.

RESOLUTION NO. 5

Whereas the Convention of American Instructors of the Deaf now has a new constitution, and

Whereas historically the membership of the CAID as a whole has not been actively involved in the actual functioning of the organization, and

Whereas the CAID executive committee should be deeply concerned with the membership and its active involvement in the organization as a whole. Therefore be it

Resolved, That the CAID executive committee assume the responsibility for periodically assessing the role and function of the CAID through formal evaluation procedures with the primary characteristic of such evaluation being the receiving of feedback from the membership at large.

ELECTION COMMITTEE REPORT

R. M. McAdams

You might be interested to know that 225 members voted. The following members were elected:

For president-elect, Joseph Youngs, Jr., from the Governor Baxter School, Maine.

For first vice president, Les Rudy, from the California School for the Deaf, Riverside.

For second vice president, Henry Bjorlie, from the New York State School for the Deaf, Rome.

For secretary-treasurer, Gerald Burstein, from the California School for the Deaf, Riverside.

For director, Kenneth Clark, from the Kansas School for the Deaf, Olathe.

For director, Ronald Nomeland, from the Kendall Demonstration Elementary School, Washington, D.C.

MEMBERSHIP COMMITTEE REPORT

Ellery J. Adams

The membership committee was not in communication during the past biennium. However, several areas of concern have been identified by the President, the Executive Secretary, the Chairman and the members. This report, then will contain more suggestions for the next biennium than accomplishments of the past. Membership for calendar '75 is approximately 3850. Applications were mailed for distribution to all programs in the directory and a second, follow-up mailing was made in January.

Several factors have minimized the growth of CAID in the face of the growth in the number of persons eligible for membership.

1. The greatest growth has been in the area of smaller day class programs whose members generally are unable to travel to national conventions.

2. CEC, through local chapters, provides a more visible organization for membership.

3. Some schools which traditionally have paid for staff membership in CAID no longer do so.

4. The often violent evidence of the 100 years war in the Annals has obscured the fact that exponential growth in the use of total communication has occurred with little operational guidance in what constitutes a total communication program.

5. Many people question the value of the Annals as the only tangible reward for membership.

The chairman has the following suggestions to make for the coming years:

1. Develop a questionnaire which will identify what teachers of the deaf would expect to receive as a result of membership.

2. Explore the establishment of state and local chapters or association with existing ones. (They are floundering, too).

3. Explore the possibility of an association with CEC or ASHA without losing organizational identity.

4. Mount an aggressive recruitment campaign at the regional and national meetings of other organizations attended by teachers of the deaf.

5. Develop a clear set of goals which identify the need for increased membership as a means for improving services to deaf children and improving the profession.

ACTIONS OF THE EXECUTIVE COMMITTEE, 1973–1975

JULY 31, 1973.

Ballot No. 1

1. 1973–1975 budget: approved unanimously.

2. Expenditure of $500 to retain legal counsel for the CAID: 9 approved—1 disapproved.

3. Los Angeles as site for the 1977 CAID biennial meeting, with the Los Angeles County Board of Education as host: 9 approved—1 disapproved.

JANUARY 4, 1974.

Ballot No. 2

For payment of $200 yearly dues to the Council of Organizations Serving the Deaf: 9 approved—1 disapproved.

MARCH 14, 1974.

Ballot No. 3

For payment of $600 as the CAID share of compensation to Ferne Davis and Sarah Toomer for extra services in the CAID office: 9 approved—0 disapproved.

JULY 25, 1974.

Ballot No. 4

For dissolution of the Council of Organizations Serving the Deaf: 9 approved—1 disapproved.

OCTOBER 16, 1974.

Ballot No. 5

For revision of the CAID constitution and proposed bylaws: approved unanimously.

OCTOBER 16, 1974.

Ballot No. 6

To establish a section for teachers of English: approved unanimously.

FEBRUARY 4, 1975.

Ballot No. 7

For payment of $500 for Council on Education of the Deaf dues: approved unanimously.

MARCH 13, 1975.

Ballot No. 8

For payment of $250 for National Association of the Deaf Youth Leadership Camp: 6 approved—4 disapproved.

MAY 20, 1975.

Ballot No. 9

To enter into a cash care agreement for investing surplus funds: 9 approved—0 disapproved.

MEETING OF THE JOINT ADMINISTRATIVE COMMITTEE OF THE NATIONAL OFFICE

Washington, D.C., January 26, 1975

The first meeting of the Joint Administrative Committee of the National Office convened at 9:50 a.m., January 26, 1975, in Washington, D.C.

Those present representing the Conference of Executives of American Schools for the Deaf were Richard Brill, president; Ralph Hoag, president-elect; and Lloyd Harrison, immediate past president. Representing the Convention of American Instructors of the Deaf were Jack Brady, president; Robert Davila, president-elect; and Armin Turechek, immediate past president. Also present from the National Office, were Howard Quigley, executive director and Ferne Davis, administrative assistant.

The meeting was chaired by Lloyd Harrison, the CEASD immediate past president, who will serve thus until June 30, 1975, when the immediate past president of the CAID will become chairman, to serve until June 30, 1976. Thereafter the immediate past presidents will serve as chairmen, alternating between the CEASD and the CAID.

There was no formal agenda for the meeting. This report reflects the items discussed, although formal action in most cases was not taken.

TITLE

It was agreed that the person heading the National Office shall bear the title of Executive Director.

COMMITTEE TITLE

It was agreed that the joint committee shall be known as the Joint Administrative Committee of the National Office.

ORGANIZATION CHART

Since the Executive Director remains the project director for the CEASD-OE contract for captioned films distribution, the organization chart should reflect this. A revised chart is appended.

POLICY FOR USE OF CASH ASSETS

The Executive Director reported that as of December 31, 1974 total cash assets of the CEASD, CAID and AAD were $334,000. He requested guidance for handling of this accumulation. It was decided that the Joint Committee should receive all quarterly and annual financial reports. However, each organization has the responsibility for determining expenditures for special projects, as well as the operating budgets. The Joint Committee can act only in developing over-all policies. Furthermore, each organization, through the Joint Committee, should have knowledge of large projects that would create in the

National Office an inordinate workload to be carried out at the expense of the other groups.

FISCAL MATTERS

Although the Joint Committee is generally recognized as responsible for the over-all management policies of the National Office, it is recognized that each organization is responsible for its budget, and that the combined budgets for the CEASD-CAID-AAD constitute the budget for the National Office.

Preparation of the annual budget will include staff salaries, paid by the component organizations, the Executive Director's salary to be set by committee action. All other salaries will be recommended by the Executive Director and approved or adjusted by the Committee. The Committee will serve as a flow-through agent to the Executive Committee of the CEASD and CAID and to the Joint ANNALS Administrative Committee.

Salaries, fringe benefits, rent, telephone and other such items shared by the organizations will be paid for on a shared basis. Items not so shared become the financial responsibility of each organization, as reflected in the separate budgets.

Budgets should reflect the reserve funds held by each organization. Such funds are currently indicated in the quarterly reports.

Some discussion centered on line item changes in the budget, since items can be either over-budgeted or under-budgeted. Some felt a limitation in such changes should be made, but the majority felt that the adjustments should be flexible, as long as the total of the budget is not exceeded.

It was agreed that a workload in excess of normal that is placed on the National Office should be underwritten by the organization imposing it.

Upon a motion made by Dr. Hoag it was voted that a fixed amount be authorized for donations to charitable organizations. For trial, a figure of $100 a year was established. This would be included in the budget as a miscellaneous item.

Travel as a budget item will include anticipated travel for the director to attend professional meetings, and for organization officers attending authorized conferences. The director will attend professional meetings to participate as a representative of the organizations composing the National Office.

All funds over normal operating expenses will be invested in accordance with a cash care plan approved by both Executive Committees.

JOINT COMMITTEE AND NATIONAL OFFICE RELATIONSHIPS

With respect to the Executive Director's limits of authority, he shall be guided by the approved budgets and general guidelines established by the Joint Committee. Such guidelines need not be in detail.

It was agreed that a Joint Committee is necessary to act as the intermediary between the respective governing boards and the National Office. The Committee generally will resolve questions of how something is done rather than if it should be done. The "if" is the prerogative of the separate organizations. Each organization will continue to carry on its activities as in the past.

The Joint Committee shall also serve as a sounding board for the National Office in matters other than routine.

In the matter of reports, the Executive Director will report to the Executive Committees and to the general assemblies in convention.

In general there appears to be a distinct relationship of responsibilities. Each organization determines how it wishes to spend its money, how to serve its membership, etc., and then relies upon the National Office and the Joint Committee to carry these out.

RELATIONSHIP BETWEEN THE JOINT COMMITTEES FOR THE NATIONAL OFFICE AND THE ANNALS

Considerable discussion centered on this topic. Consensus of the group was that it is better to leave the **ANNALS** committee as is, for two principal reasons: (a) the committee membership would become unwieldy if merged, and (b) the **ANNALS** committee already has an administrative function, and the chairman is always selected from CEASD membership.

NEWSLETTERS

It was agreed that the newsletters that have been distributed are satisfactory. It is believed, however, that enclosures benefitting other organizations should carry a charge proportionate to the handling and postage costs. It was moved by Dr. Turechek and voted that the flyer currently accepted for free mailing be sent, but charges for future such enclosures shall be made.

CONVENTION ACTIVITY RELATED TO THE NATIONAL OFFICE

The first question that arose was whether or not a convention should be planned to make money for the organization. The answer was "yes."

It was agreed that since at this time it is difficult to assess the role of the National Office in regard to conventions this is an item that needs to be developed. However, the Executive Director should be in close touch with on-site convention planning.

MINUTES OF MEETINGS OF THE JOINT COMMITTEE

When the Committee meets in Washington minutes will be kept and processed by the National Office staff. When meetings are held elsewhere the Chairman will appoint a secretary pro tem. The National Office will duplicate and distribute the minutes as directed.

INCORPORATION OF OTHER ORGANIZATIONS

The suggestion was made that other organizations that do not have a staffed office (i.e., RID) might be incorporated into the National Office. Following a discussion of this the consensus was that currently the feasibility for doing this is not clear, but the door should not be closed to future consideration of such action.

BICENTENNIAL INVOLVEMENT

Since Washington will be the center of bicentennial celebration activities, all organizations are being contacted to participate, including the CEASD and the CAID. Following discussion of this topic the consensus was that some effort should be put forth. This would create a degree of visibility for the two organizations.

FUNDS FOR FOREIGN AID

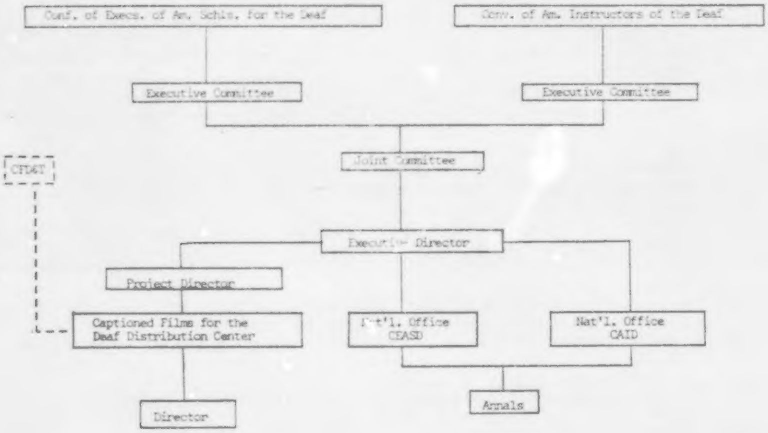
It was proposed that arrangements might be made for voluntary contributions to be included with membership dues each year, for aid to schools for the deaf. No action was taken on this topic, since it is regarded as a matter for each organization.

FREQUENCY OF JOINT COMMITTEE MEETINGS

The frequency of meetings cannot be anticipated at this time, other than to meet during convention week in Greensboro.

The meeting adjourned at 3:15 p.m.

NATIONAL OFFICES


Conf. of Execs. of Am. Schls. for the Deaf
Conv. of Am. Instructors of the Deaf
Executive Committee
Executive Committee
Joint Committee
CFD&T
Executive Director
Project Director
Captioned Films for the Deaf Distribution Center
Nat'l. Office CEASD
Nat'l. Office CAID
Director
Annals

MINUTES OF THE EXECUTIVE COMMITTEE

Greensboro, North Carolina, June 23, 1975

The meeting was called to order at 2:05 p.m., with President Jack Brady presiding. Committee members present were Gerald Burstein, Robert Davila, Rosemary Hilke, William McConnell, Frank Slater and Armin Turechek. Also present were Ferne Davis, Administrative Assistant, and Howard Quigley, Executive Director, from the national office.

I. President Brady led a discussion that centered on a communication from The Austine Teacher Association regarding CAID support of the Annals. By acclamation, it was decided that it would be a poor time to suggest changes in the proposed bylaws; rather let them stand as they are and make changes two years hence, if indicated.

II. On motion of Gerald Burstein it was voted that President-elect Robert Davila and Howard Quigley be authorized to expend from CAID funds an amount not to exceed $10,000 for the production and distribution to all 1975 members the Proceedings of the 1975 Convention.

III. On motion of Robert Davila it was voted to amend Ballot #9, regarding the Cash Care agreement, to provide an indefinite extension of the agreement, instead of a one year extension.

IV. On motion of Armin Turechek it was voted that the following resolution be adopted:

Resolution—By action of the Executive Committee of the Convention of American Instructors of the Deaf, Inc., the Executive Director is authorized to establish checking and savings accounts and to sign in behalf of the organization documents required by banks and other savings institutions. Authorized June 23, 1975.

V. By general consent it was agreed that the current Executive Committee recommend to the new Executive Committee that requests to CAID for financial support be carefully examined in accordance with policies established by the Committee.

VI. On motion of Armin Turechek it was voted that the report and budget submitted by the Executive Director be accepted.

VII. The Committee, by general agreement, in response to a request from James Flood of Ohio, ruled that the matter of a CAID representative to sit on the advisory board of a proposed home for aged deaf requires additional information before any action can be taken.

VIII. On motion of Robert Davila it was voted that Jack Brady represent the CAID at the Canadian Association of the Deaf meeting in Montreal, August 20-23, 1975.

IX. The Committee, by acclamation, agreed to award posthumously, a certificate of merit to Kenneth F. Huff, long-time educator and friend of the deaf.

X. Letters from student associations from Bloomsburg College, Pennsylvania, and Colorado University at Greeley, were reviewed. Affiliation of such groups will be no problem provided the proposed constitution and bylaws are adopted.

XI. The meeting was adjourned at 4:30 p.m. following expressions from President Brady of appreciation for the cooperation he had received during his term in office.

MEETING OF THE EXECUTIVE COMMITTEE

Greensboro, North Carolina—June 26, 1975

The meeting was called to order at 5:20 p.m. by President Davila. Committee members present were Henry Bjorlie, Jack Brady, Gerald Burstein, Rosemary Hilke, Ronald Nomeland. Others present were Ferne Davis, Administrative Assistant, and Howard Quigley, Executive Director, from the national office.

President Davila briefly spoke to several points:

1. He anticipates that each member of the Executive Committee will have responsibilities in the conduct of CAID affairs.
2. He mentioned the need for early preliminary planning for the 1977 convention in Los Angeles; that procedures learned related to the 1975 Convention will be applied to planning for the 1977 Convention. He distributed copies of preliminary correspondence with Ellery Adams.
3. He discussed briefly the previously distributed constitution and bylaws developed by the English Teachers group.
4. He discussed the evaluation process that will be carried out by New York University under the direction of Dr. Schein.
5. He emphasized the need of nominations for associate editors to work with the Newsletter editor.
6. He expressed his desire to develop the concept that all the committee members work as a team.
7. He requested that copies of correspondence be sent to the national office.

The meeting was adjourned at 5:30 p.m.

MINUTES OF BUSINESS MEETINGS

Greensboro, North Carolina

June 24, 1975

The meeting was called to order by President Jack Brady at 3:00 p.m. A quorum was declared present.

I. On motion of Richard Lane it was voted that the Proceedings of the 1973 convention be approved.

II. Report of the President.

III. Report of the Executive Director: On motion of William McClure it was voted that the report of the Executive Director be accepted.

IV. Report of the ANNALS Joint Administrative Committee: On motion of Earl Watkins it was voted that the report be accepted.

V. Report of the Representative to the Board of the Council of Organizations Serving the Deaf: On motion of Richard Brill it was voted that the report be accepted.

VI. Report of the Committee on Houseparents: On motion of Richard Gates it was voted that the report be accepted.

VII. Report of the Nominating Committee: Nominations from the floor:

Ed Corbett was nominated by Wayne Sinclair for President-elect.

Efford Johnson was nominated by Virgil Flathouse for First Vice President.

Ronald Nomeland was nominated by Edward Merrill for Director.

The meeting recessed at 5:05 p.m., to reconvene at 3:00 p.m., June 25.

June 25, [illegible]

The meeting was called to order at 3:00 p.m., President Brady presiding. A quorum was declared present.

VIII. Report from the International Association of Parents of Deaf Children: On motion of Rance Henderson it was voted that the report be accepted.

IX. Report of the Council on Education of the Deaf: On motion of David Spidal it was voted that the report be accepted.

X. On motion of Robert Davila it was voted unanimously that the proposed constitution and bylaws, as printed in the September, 1974, CAID NEWSLETTER be adopted.

XI. Report of the Necrology Committee: (The President requested all to stand for a moment of silent tribute to those listed in the report); On motion of George Collins it was voted that the report be accepted.

XII. Invitation for the 1979 meeting, Virgil Flathouse.

XIII. A motion by Wayne Sinclair and seconded by Julia Mayes that Total Communication be used at all business sessions was ruled out of order by the chair, with the request that it be presented to the CAID body in the form of a Resolution.

XIV. Ruth Ludivicco moved, seconded by John Shipman, that the interpreting services provided at the CAID conventions, beginning in 1977, be upgraded in order to have a professional level of interpreting provided, and that the CAID contract with the Registry of Interpreters for the Deaf for certified interpreters who can provide interpreting or translating for the hearing impaired, at a level befitting the professional standards that the CAID expounds.

On motion of George Propp it was voted to amend the original motion to delete the requirement that the CAID contract with the Registry of Interpreters for the Deaf.

The original motion, as amended, was voted upon and passed.

The meeting recessed at 5:15 p.m. to reconvene at 3:00 p.m., June 26, 1975.

June 26, 1975

The meeting was called to order at 3:00 p.m., President Brady presiding. A quorum was declared present.

XV. Report of the CAID Newsletter editor.

XVI. Report of the Resolutions Committee: On motion of Carole Apple it was voted that the above Resolutions be accepted.

XVII. Report of the Elections Committee.

XVIII. On motion of Gertrude Galloway it was voted that the presiding officer of this meeting appoint a chairperson for a Committee on the Uniformity of Signs and that chairperson will then appoint a committee of four additional members, at least three of whom are deaf and who represent different geographical areas, to analyze and report on, first, the uniformity of signs taught for classroom learning situations in educational programs; second, the possibility of establishing a clearing house or information-sharing center for signs utilized in various programs, and, third, the mechanics for the dissemination of information on signs to all institutions, agencies, training programs and schools and classes for the hearing impaired.

President Brady appointed Mrs. Roslyn Rosen following approval of the above motion.

XIX. On motion of Barbara Barker it was voted that the CAID provide, or explore the possibility of providing funds, if necessary, to help the Committee on the Uniformity of Signs.

XX. The meeting was adjourned at 4:10 p.m.

INDEX

A

Page

Aasbo, Suzanne, project Spanish fiesta—an intensive program designed to meet the needs of Spanish-speaking parents of preschool deaf children 84
Achtzehn, James, affective domain-effective education 367
Act of incorporation xiii
Adams, Ellery, membership committee report 648
Adler, Edna, underachievement 271
Adler, Sol, a habilitation program for children with moderate, severe, and profound language retardation: a team approach 263
Adult basic education programs for deaf people, Linad Donnels 480
Adult education for deaf people: icing on the cake? Leon LeBuffe 474
Adverbial clauses: a developmental method, James E. McCarr 285
Affective domain-effective education, James Achtzehn 367
Aldridge, Lita, a progressive parent-child program (with Susan Hilton) *
Alprin, Linda, diagnostic prescriptive teaching: a means to individualize instruction and implement an educational package through assessment and diagnosis (with Linda Schafbuch) 117
Alternative approaches to serving children with learning problems in a residential school for the deaf, Virgil Flathouse 210
American Annals of the Deaf, annual report, William J. McClure 632
Apple, Carole, resolutions committee report 646
Apple tree language program, the, Janis Caniglia, Norma Jean Cole, Marcia Rice, Wyman Howard and Emmylou Krohn 192
Appraising certain linguistic structures in the receptive-sign language competence of deaf children, Elaine Costello and Augustin A. Root 123
Archambault, Patricia, a coordinated program of speech development and improvement—design, problems, and needs 53
Art curriculum design, construction and evaluation, James L. Tucker, Jean Fulton, William D. Grant and Barbara Petterson 358
Art therapy at KDES, Thomas Baker 363
Assessment of aural and oral skills program planning for NTID students, the, Joanne D. Subtelny 603
Assessment of emotional and social functioning of young hearing impaired students, Judith Burroughs-Keith 68
Athey, Judy, community education and schools for the deaf 581
Avery, Joseph, internship programs at the National Technical Institute for the Deaf 387

B

Ballots of the executive committee, 1973–75 649
Baker, Thomas, art therapy at KDES 363
Baldwin, Richard L., behavioral aspects of communication: implications for auditory-oral and total communication advocates 182
Baltzer, Susanna, early education of the hearing impaired: a description and analysis (with Clarence M. Williams and Anne Wilkinson-Hobson) *
Beg, borrow, innovate, Roberta Borron 354
Beggs, Barbara, coordinator, concurrent session 40
Behavioral aspects of communication: implications for auditory-oral and total communication advocates, Richard L. Baldwin 182
Behre, Anne, New York speaks to the mainstream issue 93
Bishop, Milo E., planning and the career development model (with Jack Clarcq) 530
Bodner, Barbara A., a conceptualization of instructional technology and the education of the deaf 144
Boothroyd, Arthur, the role of instrumental speech processing aids in a speech training program 47

*Paper not available.

Page

Borron, Robert, beg, borrow, innovate 354
Boynton, Paul, one year in community education 583
Brady, Jack, president's report 626
Brasel, Kenneth, the influence of early language and communication environments on the development of language comprehension in deaf children 105
Britt, Phyllis, the child learns 376
Burroughs-Keith, assessment of emotional and social functioning of young hearing impaired students 68
Business meetings 656
Butler, John W., a report to the profession: the Texas plan (with Mar in
Bylaws, adopted in 1975 561
model 2
Byrd, Richard E., the school administrator: a proposed management Sallop) 444

C

Caccamise, Frank, manual communication skills assessment and program planning for NTID students 610
Caniglia, Janis, the apple tree language program (with Norma Jean Cole, Marcia Rice, Wyman Howard, Emmylou Krohn) 192
Career education: an overview and its present state of art, Victor Galloway 215
Carrier, Joseph K., an introduction to the nonspeech language initiation program (with Mary E. Shackelford and Carolyn Critcher) 296
Carson, Pamela, a study of learning in deaf children (with Cornelius P. Goetzinger) 153
Castle, William, issues in postsecondary education programs: a panel discussion (with Edward C. Merrill, Ray L. Jones, Patrick Duggan and Gilbert Delgado) 576
Castle, William, the planning process at NTID *
CEASD certification for house parents, Peter Ripley *
CEASD committee on program evaluation, Robert W. Tegeder *
CED certification process, Ralph Hoag *
CED program accreditation, Ralph Hoag *
Child learns, the, Phyllis Britt 376
CISAG—a component of career education, Edward E. Corbett 231
Clarcq, Jack R., rational program change—why graduate follow up? (with Victor J. Maguran) 615
Clarcq, Jack R., planning and NTID's curriculum process model 538
Clarcq, Jack, planning and the career development model (with Milo E. Bishop) 530
Clark, Norma, goal attainment scaling: evaluating individual student progress at the Model Secondary School for the Deaf (with William Grant) *
Cokely, Dennis R., what they see is what they get: an innovative approach to family sign language instruction at KDES 359
Cole, Norma Jean, the apple tree language program (with Janis Caniglia, Marcia Rice, Wyman Howard, and Emmylou Krohn) 192
Collins, James L., the use of observation techniques with deaf students 417
Community education and the classroom teacher, James Cox 550
Community education and schools for the deaf, Judy Athey 581
Comparative study of academic achievement between hearing impaired and nonhearing impaired students at California State University, Northridge, a, Harry J. Murphy 232
Comparison of signs used by mothers and deaf children during early childhood, a, Kathleen Crandall 128
Concept of a work-study program for hearing impaired high school students, Don G. Pettingill 333
Conceptualization of instructional technology and the education of the deaf, a, Barbara A. Bodner 144

*Paper not available.

Page

Concurrent resolution vi
Conkey, Harlan D., the language program at the Oregon school for the deaf: preschool through high school (with William M. Erickson, James E. McCarr, Billy J. Peck and Benjamin P. Purvis) 78
Constitution, adopted in 1975 1
Convention of American Instructors of the Deaf, 47th meeting:
  Act of incorporation xii
  Ballots of executive committee, 1973–75 649
  Business sessions, minutes 656
  Bylaws adopted in 1975 2
  Constitution adopted in 1975 1
  Directors, 1973–75, 1975–77 vi
  Executive committee, minutes 654
  Invitation for 1979 meeting 645
  Meetings of: 1850–1975 xix
  Membership listing 7
  Officers, 1973–75, 1975–77 xvi
  Photograph 6
  Presidents, list of: xv
  Program, 47th meeting 40
  Reports 626–648
Cooper, Claire, developing a community services program for the deaf 486
Cooperative system for child development, a: problems changed into opportunities, Mark N. Ozer, Rudolph Gawlik, and Marlene McAleer 282
Coordinated program of speech development and improvement—design, problems, and needs, a, Patricia Archambault 53
Corbett, Edward E., CISAG—a component in career education 231
Corbett, Edward E., mainstreaming and communication training—the Delaware approach 89
Corbett, Edward E., a perspective on community education programs at the Delaware State School for the Deaf 555
Correspondence and direct service program for parents of deaf-blind children, a, Edgar L. Lowell 260
Costello, Elaine, appraising certain linguistic structures in the receptive-sign language competence of deaf children (with Augustin A. Root) 123
Council on Education of the Deaf, report 641
Council of Organizations Serving the Deaf, report, Bill Peck 635
Counseling program at the community outreach program for the deaf, Tucson, Ariz., the, Michael N. Milone, Jr. 489
Counseling techniques for deaf students with minimal language skills, Patricia Scherer 240
Cox, James, community education and the classroom teacher 550
Crandall, Kathleen, a comparison of signs used by mothers and deaf children during early childhood 128
Creating a learning environment for the exceptional deaf child, Nita Minter 322
Creative arts: a keystone of development, Carol Trigg 340
CREED III inservice teacher training in demonstration workshop: Piaget activities for thinking teachers and thinking children, Sydney Wolff 110
Critcher, Carolyn G., an introduction to the nonspeech language initiation program (with Mary E. Shackelford and Joseph K. Carrier) 296
Current curriculum options as applied to the education of the deaf, Lee Murphy 112
Current occupational outlook for the deaf technical and vocational school graduate, William Woodrick 516
Current status for services of deaf-blind children in the United States, the, Robert Dantona *

D

Damashek, Marc, design and development of simple, low-cost speech training devices 57
Dantona, Robert, the current status for services of deaf-blind children in the United States *

*Paper not available.

Page

Davila, Robert, foreward xi

Davila, Robert, chairman, program committee 40

Deaf citizen and his responsibility to the deaf community, the, Thomas Posedly 483

Deaf leader in America, the: a formula for success, Terrence J. O'Rourke *

Deaf students and higher education at California State University, Northridge, Ray Jones 569

Delgado, Gilbert, issues in postsecondary education programs: a panel discussion (with Edward C. Merrill, William Castle, Ray L. Jones, and Patrick Duggan) 577

dePietro, Lorraine, the east's model for public and community education on deafness (with William Saunders) 501

Design and development of simple, low-cost speech training devices, Marc Damashek 57

Developing a community services program for the deaf, Claire Cooper 486

Developing self awareness in deaf students, Jack Slemenda, Barbara Siegel and Lynda Hemmings 174

Development techniques, Paul Rogers III 448

Developmental investigation of speech reading skills as stimuli is varied, a, David W. Holmes and Walter B. Green 137

Development, use, and interpretation of the 1973 Stanford achievement test, special edition for hearing impaired students, the, Raymond Trybus and Carl J. Jensema 73

Diamant, Jay, a specific practical application for cued speech within an oral or total communication secondary level program for the hearing impaired *

Diagnostic prescriptive teaching: a means to individualize instruction and implement an educational package through assessment and diagnosis, Linda Schafbuch and Linda Alprin 117

Directors, CAID 1973–75; 1975–77 vi

Donnels, Linda, adult basic education programs for deaf people 480

Duggan, Patrick, issues in postsecondary education programs: a panel discussion (with Edward C. Merrill, Ray L. Jones, William Castle, and Gilbert Delgado) 566

Duggan, Patrick, the role of technical-vocational training in education of the deaf 524

Duggan, Patrick W., a time model: counseling deaf students in technical-vocational education 235

Duggan, Patrick W., two issues in postsecondary education 567

E

Early education of the hearing impaired; a description and analysis, Susanna Baltzer (with Clarence M. Williams and Anne Wilkinson-Hobson) *

East's model for public and community education on deafness, the, Lorraine dePietro (with William Saunders) 501

Education begins where training ends—a deaf learner in a learning society, Donald P. Ely 42

Educational implications of learning a first language in school, the, Raymond Stevens 247

Educational media, instructional technology, visual literacy and verbal literacy, Paul McLellan 350

Effective sign communication for instructional purposes: manual English and American sign language, Gerilee Gustason and Roslyn Rosen 455

Egelston, Judy Cobb, philosophy of career education: a theoretical paradigm for a career education program for deaf learners 222

Election committee report, R. M. McAdams 648

Ely, Donald P., education begins where training ends—the deaf learner in a learning society 42

Employment of deaf people, Boyce Williams 319

English skills assessment and program planning for NTID students, Gerard G. Walter 592

*Paper not available.

Page

Erickson, William M., the language program at the Oregon state school for the deaf: preschool through high school (with Harlan D. Conkey, James E. McCarr, Billy J. Peck, and Benjamin P. Purvis) 78
Erikson, Ellen, an experiment in responsibility *
Evaluation component of a college model of a competency based teacher education program, the, Ann Mulholland 435
Evaluation of communication skills of NTID students, the, Ross Stuckless *
Evolutionary process in developing a chemistry program at the Model Secondary School for the Deaf, an, William Hughes and Robert Wehrli 299
Evolvement of open classroom at the learning center, Warren A. Schwab 160
Evolving role of Gallaudet College, the, Edward C. Merrill 461
Executive committee, minutes, 1975; and meeting 654, 655
Experiment in responsibility, an, Ellen Erikson *

F

Farmer, Gary W., the new role for the teacher in a residential environment (with H. G. Royall and J. Rodney Franks) *
Farell, Charles R., student personnel services for deaf students at Gallaudet College (presented for Richard Phillips) 471
Ferrell, Charles R., student personnel services in higher education for the deaf (with William Otis, Harry Murphy, and David Pimentel) *
Feulner, Joanne, planning and implementing a total communication program 185
Fitch, Bryan, what is career education? 219
Flathouse, Virgil, alternative approaches to serving children with learning problems in a residential school for the deaf 210
Flathouse, Virgil, invitation for 1969 meeting 645
Foreword xi
Franks, J. Rodney, the new role for the teacher in a residential environment (with H. G. Royall and Gary W. Farmer) *
Frisina, Robert, the role of the National Technical Institute for the Deaf in education of the deaf 464
Fulton, Jean, art curriculum design, construction, and evaluation (with James L. Tucker, William D. Grant, and Barbara L. Petterson) 358

G

Gallaudet graduate school program in simultaneous communication in the department of education, the, Gerilee Gustason 407
Galloway, Maryilyn Ware, occupational outlooks for deaf college graduates 513
Galloway, Victor, career education: an overview and its present state of art 215
Gawlik, Rudolph, a cooperative system for child development: problems changed into opportunities (with Mark N. Ozar and Marlene McAleer 282
Goal attainment scaling: evaluating individual student progress at the Model Secondary School for the Deaf, Norma Clark and William Grant *
Godsave, Bruce, Rhode Island language curriculum: unit teaching strategies (with Carol Godsave) 135
Godsave, Carol, Rhode Island language curriculum: unit teaching strategies (with Bruce Godsave) 135
Goetzinger, Cornelius P., a study of learning in deaf children (with Pamela Carson) 153
Government as change agent, the: the Federal perspective, Malcolm Norwood 140
Grant, June, a program providing services for 0–3-year-old hearing impaired children from Spanish-speaking homes 394
Grant, William D., art curriculum design, construction, and evaluation (with James L. Tucker, Jean Fulton, and Barbara L. Petterson) 358
Grant, William, goal attainment scaling: evaluating individual student progress at the Model Secondary School for the Deaf (with Norma Clark) *
Grant, William, storage, analysis and retrieval of audiometric data (with Herbert Rosen) 315
Green, Walter B., a developmental investigation of speech reading skills as stimuli is varied (with David W. Holmes) 137

*Papers not available.

Page

Gustason, Gerilee, effective sign communication for instructional purposes: manual English and American sign language (with Rosyln Rosen) 455

Gustason, Gerilee, the Gallaudet graduate school program in simultaneous communication in the department of education 407

H

Habilitation program for children with moderate, severe and profound language retardation, a: a team approach, Sol Adler 263

Harris, Robert I., reflection-impulsivity in deaf children of deaf versus hearing parents 64

Healy, William, hearing impaired mentally retarded (with Doreen S. Karp-Nortman) 303

Hearing impaired mentally retarded, William Healy and Doreen S. Karp-Nortman 303

Hehir, Richard, mainstreaming and continuum of education services for the hearing impaired 95

Heldinger, Virginia, instructor of short course on language development 41

Hemmings, Lynda, developing self awareness in deaf students (with Jack Slemenda and Barbara Siegel) 174

Hicks, Doin, management in the educational setting 441

Hilton, Susan, progressive parent-child program, a, (with Lita Aldridge) *

Hoag, Ralph, CED certification process *

Hoag, Ralph, CED program accreditation *

Holmes, David W., a developmental investigation of speechreading skills as stimuli is varied (with Walter B. Green) 137

Hoover, Robert C., the Southwest Center for the Hearing Impaired: a rehabilitation facility for the low verbal multiply handicapped deaf adult *

Houseparents section, report, Peter Ripley *

Howard Wyman, the apple tree language program (with Janis Caniglia, Norma Jean Cole, Marcia Rice, and Emmylou Krohn) 192

Hughes, William, an evolutionary process in developing a chemistry program at the Model Secondary School for the Deaf (with Robert Wehrli) 299

Humanistic aspects of teacher education for the hearing impaired, Lee Murphy 344

Hyatt, Majorie L., student and teacher activity checklists for use in classrooms of the hearing impaired 421

I

Implementation of career education curriculum of MSSD, Richard Steffan 228

Influence of early language and communication environments on the development of language comprehension in deaf children, the, Kenneth Brasel 105

International Association of Parents of Deaf Children, report, Mary Ann Locke 637

Internship programs at the National Technical Institute for the Deaf, Joseph Avery 387

Introduction to the nonspeech language initiation, program, an, Mary E. Shackelford, Joseph K. Carrier, and Carolyn G. Critcher 296

Invitation for 1979 meeting 645

Issues in postsecondary education programs: a panel discussion, Edward C. Merrill, William Castle, Ray L. Jones, Patrick Duggan, and Gilbert Delgado 566

J

Jacobs, L. Ronald, a service delivery system which facilitates self-determination for postsecondary hearing impaired students *

Jensema, Carl J., the development, use, and interpretation of the 1973 Stanford achievement test, special edition for hearing impaired students (with Raymond Trybus) 73

*Papers not available.

Page

Job placement and new careers, a panel discussion, Boyce Williams, Rex Purvis, Terry Kemp, Henry Warner and Paul Boynton *

Johnson, Kerry A., the media director in an emerging era 149

Joint administrative committee for the national office, minutes 650

Jones, Ray L., issues in postsecondary education programs: a panel discussion (with Edward C. Merrill, William Castle, Patrick Duggan, and Gilbert Delgado) 569

Jones, Ray L., the role of the university in education of deaf students in the 1970's 519

Jones, Ray, a survey of employment status of hearing impaired master's program graduates *

Jones, Ray, deaf students and higher education at California State University, Northridge 569

K

Karp-Nortman, Doreen S., hearing impaired mentally retarded (with William Healy) 303

Kemp, Terry, job placement and new careers (with Boyce Williams, Rex Purvis, Henry Warner and Paul Boynton) 584

Kircner, Carl J., coordinator of short courses 40

Kirchner, Carl J., instructor of short course on total communication in the classroom 41

Kos, Susanne, maximizing hearing aid usage in a public day school for the deaf (with Melissa R. Scott) 312

Kreis, Max, newsletter report 645

Krohn, Emmylou, the apple tree language program (with Janice Caniglia, Norma Jean Cole, Marcia Rich, and Wyman Howard) 192

L

Language program at the Oregon state school for the deaf, preschool through high school, the, Harlan D. Conkey, William M. Erickson, James E. McCarr, Billy J. Peck, and Benjamin P. Purvis 78

LeBuffe, Leon, adult education for deaf people: icing on the cake? 474

LeNard, Judith, strategies for staff development (with Margaret Withrow) 426

Lenman, Robert, instructor of short course on behavior modification 41

Letter of submittal ix

Letter of transmittal vii

Liben, Lynn S., the relationship of sign language to memory processes in postsecondary deaf students (with Richard C. Nowell and Carla J. Posansky) 410

Locke, Mary Ann, International Association of Parents of the Deaf report 637

Lowell, Edgar L., a correspondence and direct-service program for parents of deaf-blind children 260

Lowell, Edgar L., coordinator, concurrent session 40

M

McAdams, R. M., election committee report 648

McAleer, Marlene, a cooperative system for child development: problems changed into opportunities (with Mark N. Ozer and Rudolph Gawlik) 282

McCarr, Dorothy, prescriptive use of the continental press spirit masters 254

McCarr, James E., the language program at the Oregon state school for the deaf: preschool through high school (with Harlan D. Conkey, William M. Erickson, Billy J. Peck, and Benjamin P. Purvis) 78

McCarr, James E., adverbial clauses: a developmental method 285

McClure, William J., Annals report 632

McLellan, Paul, educational media, instructional technology, visual literacy and verbal literacy 350

Maguran, Victor J., rational program change—why graduate follow up? (with Jack R. Clarcq) 615

*Papers not available.

Page

Mainstreaming and communication training—the Delaware approach, Edward E. Corbett 89
Mainstreaming and continuum of education services for the hearing impaired, Richard Hehir 95
Management in the educational setting, Doin Hicks 441
Manual communication skills assessment and program planning for NTID students, Frank Caccamise 610
Maximizing hearing aid usage in a public day school for the deaf, Susanne Kos and Melissa R. Scott 312
Media director in an emerging era, the, Kerry A. Johnson 149
Meeting the needs of the deaf child with cerebral palsy, Linda Searle Theil 205
Meeting the needs of multihandicapped hearing-impaired children, David Tweedie 403
Meetings of the CAID xiv
Membership committee, report, Ellery Adams 648
Membership, list 7
Merrill, Edward C., the evolving role of Gallaudet College 461
Merrill, Edward C., issues in postsecondary education programs: a panel discussion (with William Castle, Ray L. Jones, Patrick Duggan, and Gilbert Delgado) 566
Miller, Fani Brown, open classroom at Kendall Demonstration Elementary School 166
Milone, Michael N. Jr., the counseling program at the community outreach program for the deaf, Tucson, Ariz 489
Mindel, Eugene, the role of the psychiatrist in the deaf community *
Minton, Nita, creating a learning environment for the exceptional deaf child 322
Minutes, executive committee 654
Mosher, Nancy L., personal living skills for hearing impaired adults 543
Mulholland, Ann, the evaluation component of a college model of a competency based teacher education program 435
Muller, Keith, parents of multiply handicapped deaf children (with Doris Naiman and Gail Turney) 308
Munn, Roy, student life program: Texas School for the Deaf 413
Murphy, Harry, student personnel services in higher education for the deaf (with Charles R. Ferrell, William Otis, and David Pimentel) *
Murphy, Harry, student support services for deaf students at California State University, Northridge 468
Murphy, Harry J., a comparative study of academic achievement between hearing impaired and non-hearing impaired students at California State University, Northridge 232
Murphy, Lee, current curriculum options as applied to the education of the deaf 112
Murphy, Lee, humanistic aspects of teacher education for the hearing impaired 344

N

Naiman, Doris, parents of multiply handicapped deaf children (with Gail Turney and Keith Muller) 308
National Center on Educational Media and Materials for the Handicapped, Hubert D. Summers *
National office, CAID, report, Howard M. Quigley 627
Necrology, report, Pauline Shahan 644
New careers for deaf people: the rehabilitation perspective, Boyce Williams 541
New role for the teacher in a residential environment, the H. G. Royall, J. Rodney Franks, and Gary W. Farmer *
Newsletter, CAID, report, Max Kreis 645
New York speaks to the mainstream issue, Anne Behre 93
Nominations, committee report, Lowell A. Thompson 636
Norwood, Malcolm, the government as change agent: the Federal perspective 140
Nowell, Richard C., the relationship of sign language to memory processes in postsecondary deaf students (with Lynn S. Liben and Carla J. Posansky) 410

*Papers not available.

O

Page

Occupational outlooks for deaf college graduates, Maryilyn Ware Galloway ---------- 513
Officer, CAID, 1973–75; 1975–77 ---------- xvi
One year in community education, Paul Boynton ---------- 583
Open classroom at Kendall Demonstration Elementary School, Fani Brown Miller ---------- 166
O'Rourke, Terrence J., the deaf leader in America: a formula for success ---------- *
Otis, William, student personnel services in higher education for the deaf (with Charles R. Ferrell, Harry Murphy, and David Pimentel) ---------- *
Otis, William, technical education programs for the deaf ---------- 579
Ozer, Mark N., a cooperative system for child development: problems changed into opportunities (with Rudolph Gawlik and Marlene McAleer) ---------- 282

P

Palmer, Ursula, the value and training of paraprofessional workers with deaf people ---------- 398
Panel: public and community education, Armin G. Turechek ---------- *
Parent learns, the, Phyllis Rudman ---------- 383
Peck, B. J., Council of Organizations Serving the the Deaf report ---------- 635
Parents of multiply handicapped deaf children, Doris Naiman, Gail Turney and Keith Muller ---------- 308
Patterned language—a comprehensive program for written language, Bill P. Peck ---------- 199
Peck, Bill, the language program at the Oregon State School for the Deaf: preschool through high school (with Harlan D. Conkey, William M. Erickson, James E. McCarr, and Benjamin P. Purvis) ---------- 78
Peck, Bill, patterned language—a comprehensive program for written language ---------- 199
Peck, B. J., Council of Organizations Serving the Deaf, report ---------- 635
Perspectives of a counseling and community services center for the deaf, Edgar H. Shroyer ---------- 492
Perspective on community education programs at the Delaware State School for the Deaf, a, Edward E. Corbett ---------- 555
Personal living skills for hearing impaired adults, Nancy L. Mosher ---------- 543
Petterson, Barbara L., art curriculum design, construction and evaluation (with James L. Tucker, Jean Fulton, and William Grant) ---------- 358
Pettingill, Don G., concept of a work-study program for hearing impaired high school students ---------- 333
Pfau, Glenn S., Project LIFE: a potential extension of the formal learning environment (with David A. Spidal) ---------- 178
Phillips, Richard, student personnel services for deaf students at Gallaudet College (presented by Charles R. Ferrell) ---------- 471
Philosophy of career education: a theoretical paradigm for a career education program for deaf learners, Judy Egelston ---------- 222
Photograph ---------- 6
Pimentel, David student personnel services for the deaf at Lee College ---------- 557
Pimentel, David, student personnel services in higher education for the deaf (with Charles R. Ferrell, William Otis, and Harry Murphy) ---------- *
Planning and implementing a total communication program, Joanne Feulner ---------- 185
Planning and the career development model, Milo E. Bishop and Jack Clarcq ---------- 530
Planning and NTID's curriculum process model, Jack R. Clarcq ---------- 538
Planning process at NTID, the, William Castle ---------- *
Planning process at the National Technical Institute for the Deaf, the, Fred Wilson ---------- 526
Porter, Larry, instructor of short course on professional relationships ---------- 41
Posedly, Thomas, the deaf citizen and his responsibility to the deaf community ---------- 483
Posansky, Carla J., the relationship of sign language to memory processes in postsecondary deaf students (with Richard C. Nowell and Lynn S. Liben) ---------- 410

*Papers not available.

Page
Preparing deaf youths for leadership roles, Frank Turk 507
Prescriptive use of the continental press spirit masters, Dorothy McCarr 254
Presidents, list of xv
President's report, Jack Brady 628
Program, 47th meeting 40
Progressive parent-child program, a, Lita Aldridge (with Susan Hilton) *
Program providing services for the 0–3-year-old hearing impaired children from Spanish-speaking homes, a, June Grant 394
Project LIFE: a potential extension of the formal learning environment, Glenn S. Pfau and David A. Spidal 178
Purvis, Benjamin P., the language program at the Oregon State School for the Deaf: preschool through high school (with Harlan D. Conkey, William M. Erickson, James E. McCarr, and Billy J. Peck) 78
Project Ski-Hi—early intervention and identification programs, Skip Reese *
Project Spanish Fiesta—an intensive program designed to meet the needs of Spanish-speaking parents of preschool deaf children, Suzanne Aasbo 84
Public speaking through total communication, Shirley P. Stein and Rosemary D. Weller 190
Purvis, Benjamin P., (with Harlan D. Conkey, William M. Erickson, James E. McCarr), the language program at the Oregon state school for the deaf: preschool through high school 78
Purvis, Rex, job placement and new careers (with Boyce Williams, Terry Kemp, Henry Warner and Paul Boynton) *

Q

Quigley, Howard, national office report 627

R

Rational program change—why graduate followup? Jack R. Clarcq and Victor J. Maguran 615
Reese, Skip, Project Ski-Hi—early intervention and identification programs *
Reflection-impulsivity in deaf children of deaf versus hearing parents, Robert I. Harris 64
Relationship of sign language to memory processes in postsecondary deaf students, the, Richard C. Nowell, Lynn S. Liben, and Carla J. Posansky 410
Report to the profession, a: the Texas plan, John W. Butler and Marvin Sallop 561
Reports:
    American Annals of the Deaf, William J. McClure 632
    Council on Education of the Deaf, Jane Williams 641
    Council of Organizations Serving the Deaf, Bill Peck 635
    Executive committee (ballots) 649
    Houseparents section, Peter Ripley *
    International Association of Parents of Deaf Children, Mary Ann Locke 637
    Joint administrative committee, Lloyd Harrison 650
    National office, Howard M. Quigley 627
    Necrology, Pauline Shahan 644
    Membership, Ellery Adams 648
    Newsletter, Max Kreis 645
    Nominations, R. M. Adams 636
    President, Jack Brady 626
    Resolutions 646
Resolutions committee report, Carole Apple 646
Rhode Island language curriculum: unit teaching strategies, Carol Godsave and Bruce Godsave 135
Ripley, Peter H., statewide volunteer program for residential schools in North Carolina *
Rice, Marcia, the apple tree language program (with Janis Caniglia, Norma Jean Cole, Wyman Howard, and Emmylou Krohn) 192

*Papers not available.

Page
Ripley, Peter, CEASD certificatio for house parents *
Ripley, Peter, houseparents section report
Rogers, Paul, III, development techniques 444
Role of the area learning resource center (ALRC), the, Robert L. Sterrett *
Role of guidance and counseling: implications for schools and educational programs for the deaf, the, Allen E. Sussman 275
Role of instrumental speech processing aids in a speech training program, the, Arthur Boothroyd 47
Role of the National Technical Institute for the Deaf in education of the deaf, the, Robert Frisina 464
Role of the psychiatrist in the deaf community, the, Eugene Mindel *
Role of technical-vocational training in education of the deaf, the, Patrick Duggan 524
Role of the specialized office for the deaf and the hard of hearing, Robert E. Stepp 336
Role of the university in education of deaf students in the 1970's, the, Ray L. Jones 519
Root, Augustin A., appraising certain linguistic structures in the receptive-sign language competence of deaf children (with Elaine Costello) 123
Rosen, Herbert, storage, analysis, and retrieval of audiometric data (with William Grant) 315
Rosen, Roslyn, effective sign communication for instructional purposes: manual English and American sign language (with Gerilee Gustason) 455
Royall, H. G., the new role for the teacher in a residential environment (with J. Rodney Franks and Gary W. Farmer) *
Rudman, Phyllis, the parent learns 383

S

Sallop, Marvin, a report to the profession: the Texas plan (with John W. Butler) 561
Saunders, William, the east's model for public and community education on deafness (with Lorraine dePietro) 501
Schafbuch, Linda, diagnostic prescriptive teaching: a means to individualize instruction and implement an educational package through assessment and diagnosis (with Linda Alprin) 117
Schein, Jerome, the university's role in public and community education on deafness *
Schein, Jerome, underachieving deaf students and the undemanding curriculum *
Scherer, Patricia, counseling techniques for deaf students with minimal language skills 240
Schwab, Warren A., evolvement of open classroom at the learning center 160
School administrator: a proposed management model, the, Richard E. Byrd 444
School leavers but not school achievers, Frank Withrow 327
Scott, Melissa R., maximizing hearing aid usage in a public day school for the deaf (with Susanne Kos) 312
Service delivery system which facilitates self-determination for post-secondary hearing impaired students, a, L. Ronald Jacobs *
Shackelford, Mary E., an introduction to the nonspeech language initiation program (with Joseph K. Carrier and Carolyn G. Critcher) 296
Shahan, Pauline, necrology report 644
Shroyer, Edgar H., perspectives of a counseling and community services center for the deaf 492
Siegel, Barbara, developing selfawareness in deaf students (with Jack Slemenda and Lynda Hemmings) 174
Simmons-Martin, Audrey, the student teacher learns 370
Slemenda, Jack, developing selfawareness in deaf students (with Barbara Siegel and Lynda Hemmings) 174

*Papers not available.

Page

Smith, Rose-Marie, parents learn with their children 380

Solano, Sister Frances, coordinator, concurrent session on curriculum development and evaluation 40

Southwest Center for the Hearing Impaired: a rehabilitation facility for the low verbal multiply handicapped deaf adult, the Robert C. Hoover *

Specific practical application for cued speech within an oral or total communication secondary level program for the hearing impaired, a, Jay Diamant

Spidal, David A., Project LIFE: a potential extension of the formal learning environment (with Glenn S. Pfau) 178

Statewide volunteer program for residential schools in North Carolina, Peter H. Ripley *

Steffan, Richard, implementation of career education curriculum at MSSD 228

Stein, Shirley P., public speaking through total communication (with Rosemary D. Weller) 190

Stepp, Robert E., role of the specialized office for the deaf and hard of hearing 336

Sterrett, Robert L., the role of the area learning resource center (ALRC) *

Stevens, Raymond, the education implications of learning a first language in school 247

Stewart, Larry G., coordinator, concurrent session 40

Storage, analysis, and retrieval of audiometric data, William Grant and Herbert Rosen 315

Strategies for staff development, Margaret Withrow and Judith LeNard 426

Stuckless, Ross, the evaluation of communication skills of NTID students *

Student and teacher activity checklists for use in classrooms of the hearing impaired, Marjorie L. Hyatt 421

Student life program: Texas School for the Deaf, Roy Munn 413

Student personnel services for deaf students at Gallaudet College, Charles R. Ferrell (presented for Richard Phillips) 471

Student personnel services for the deaf at Lee College, David Pimentel 535

Student personnel services in higher education for the deaf, a panel discussion, Charles R. Ferrell, William Otis, Harry Murphy, and David Pimentel *

Student support services for deaf students at California State University at Northridge, Harry Murphy 468

Student teacher fears, the Audrey Simmons-Martin 370

Study of learning in deaf children, a, Pamela Carson and Cornelius P. Goetzinger 153

Subtelny, Joanne D., the assessment of aural and oral skills program planning for NTID students 603

Summers, Hubert D., National Center on Educational Media and Materials for the Handicapped *

Survey of employment status of hearing impaired master's program graduates, a, Ray Jones *

Sussman, Allen E., the role of guidance and counseling: implications for schools and educational programs for the deaf 275

T

Technical education programs for the deaf, William Otis 579

Tegeder, Robert W., CEASD committee on program evaluation *

Theil, Linda Searle, meeting the needs of the deaf child with cerebral palsy 205

Thompson, Lowell A., nominations committee report 636

Time model, a: counseling deaf students in technical-vocational education, Patrick W. Duggan 235

Times have changed, Henry Warner 590

Trigg, Carol, creative arts: a keystone of development 340

Trybus, Raymond, the development, use, and interpretation of the 1973 Stanford achievement test, special edition for hearing impaired students (with Carol J. Jensema) 73

Tucker, James L., art curriculum design, construction, and evaluation (with Jean Fulton, William D. Grant and Barbara L. Petterson) 358

Turechek, Armin, the west's model for public and community education on deafness 496

*Papers not available.

	Page
Tureckek, Armin G., panel: public and community education	*
Turney, Gail parents of multiply handicapped deaf children (with Doris	
Turney, Gail, parents of multiply-handicapped deaf children (with Doris Naiman and Keith Muller)	308
Tweedle, David, forward	xi
Tweedie, David, meeting the needs of multihandicapped hearing impaired Children	403
Two issues in postsecondary education, Patrick W. Duggan	567

U

Underachieving deaf students and the undemanding curriculum, Jerome Schein	*
Underachievement, Edna Adler	271
University's role in public and community education on deafness, the, Jerome Schein	*
Use of observation techniques with deaf students, the, James L. Collins	417

V

Value and training of paraprofessional workers with deaf people, the, Ursula Palmer	398

W

Walter, Gerard, English skills assessment and program planning for NTID students	592
Warner, Henry, times have changed (with Boyce Williams, Rex Purvis, Terry Kemp and Paul Boynton)	590
Wehrli, Robert, an evolutionary process in developing a chemistry program at the Model Secondary School for the Deaf (with William Hughes)	299
Weller, Rosemary D., public speaking through total communication (with Shirley P. Stein)	190
West's model for public and community education on deafness, the, Armin Turechek	496
What is career education?, Brian Fitch	219
What they see is what they get: an innovative approach to family sign language instruction at KDES, Dennis R. Cokely	359
Wilkinson-Hobson, Anne, early education of the hearing impaired: a description and analysis (with Susanna Baltzer and Clarence M. Williams)	*
Williams, Boyce, employment of deaf people	319
Williams, Boyce, panel: job placement and new careers (with Rex Purvis, Terry Kemp, Henry Warner and Paul Boynton)	*
Williams, Boyce, new careers for deaf people: the rehabilitation perspective	541
Williams, Clarence M., early education of the hearing impaired: a description and analysis (with Susanna Baltzer and Anne Wilkinson-Hobson)	*
Wilson, Fred, the planning process at the National Technical Institute for the Deaf	526
Withrow, Frank, school leavers but not school achievers	327
Withrow, Margaret, strategies for staff development (with Judith LeNard)	426
Wolff, Sydney, CREED III inservice teacher training in demonstration workshop: Piaget activities for thinking teachers and thinking children	110
Woodrick, William, current occupational outlook for the deaf technical and vocational school graduate	516

*Papers not available.